CHANGING CIVILIZATION
IN THE
MODERN WORLD

HAROLD RUGG

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CHANGING CIVILIZATIONS IN THE MODERN WORLD

A Textbook in World Geography with Historical Backgrounds

BY

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THE RUGG SOCIAL SCIENCE COURSE

THE READING BOOKS

VOLUME I · An Introduction to American Civilization
VOLUME II · Changing Civilizations in the Modern World
VOLUME III · A History of American Civilization: Economic and Social
VOLUME IV · A History of American Government and Culture
VOLUME V · An Introduction to Problems of American Culture
VOLUME VI · Changing Governments and Changing Cultures

WORKBOOKS AND TEACHER'S GUIDES

Pupil's Workbook of Directed Study and a Teacher's Guide are available to accompany each of the six volumes.

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PREFACE

Changing Civilizations in the Modern World has been prepared to help young people to understand modern civilizations by considering carefully the chief modes of living of other peoples. These ways of living together are presented in the form of thought-provoking problems in the *Pupil's Workbook of Directed Study* for *Changing Civilizations in the Modern World.* The *Reading Book* and the *Workbook* should be used in conjunction with each other.

WHAT IS THIS COURSE IN THE SOCIAL STUDIES?

This course introduces the pupils to modern civilization and its historical development. The first volume, *An Introduction to American Civilization*, is devoted chiefly to a study of economic life in the United States. The present volume, *Changing Civilizations in the Modern World*, introduces the pupil to life in other lands. It considers especially the great industrial nations, the changing agricultural countries, and the interrelation of the two. Accompanying it is a corresponding *Pupil's Workbook of Directed Study.*

THE IMPORTANCE OF INTRODUCING YOUTH TO AN UNDERSTANDING OF CONTEMPORARY CIVILIZATION

The author firmly believes that young Americans can be given an appreciation of the significant contemporary problems of living together. Current conditions in America throw into sharp relief the critical need of teaching our youth to understand American life and its relation to the modern world. Our schools are confronted with the difficult task of educating pupils to become informed, thinking citizens. During the past 150 years the rapid development of industrial civilization has produced problems of living together that baffle even the keenest adult minds.

It is of the utmost importance, therefore, that schools bend every effort to introduce our young people to the chief conditions

100366

and problems which will confront them as citizens of the world. That is the essential purpose of this new unified course in the social studies.

THE MATERIALS ARE BASED UPON THE FINDINGS OF SPECIALISTS IN HISTORY, GEOGRAPHY, GOVERNMENT, AND ECONOMICS

The foundation of this new course is a series of studies of the basic modes of living and the problems of modern life, the great movements through which institutions and problems have evolved, and the chief concepts and principles which, as history has proved, lie at the roots of living together.

Who knows best what these great institutions, problems, and trends are? Specialists on the frontier of thought who see society from a height, who detect its trends and the long-time movement of its affairs. From the mature thought of established students of modern life and its historical development, therefore, instead of from the single judgments of the textbook maker, the skeleton of this course has been designed. It is based upon nine years of investigational work. In that time thirteen research studies of what to teach have been made.[1]

A UNIFIED COURSE IN THE SOCIAL STUDIES

Why one general course rather than the separate subjects of history, geography, and civics? Because the chief aim is to understand modern life and how it came to be. To understand any institution or condition of life today the mind must utilize facts, meanings, generalizations, and historical movements that in the past have been set up in separate school subjects. For example, to understand the Westward movement of the American people one must see in close relationship the tide of immigration across the continent; the blazing of trails; the evolution of new land and waterways; the rapid development of new types of transportation; constantly changing forms of social life; the rise of cities behind the advancing frontier; the influence of mountains, deserts, climate, rivers, and soil upon travel, transportation, and communication; and where and how people live. All these factors must be tied closely together in their natural relationships. Hence the necessity of combining them into one general course instead of teaching them as separate subjects — history, geography, civics, economics, government, etc. In constructing this course one question has constantly been in the foreground of our thinking: What facts, historical movements, meanings, and principles do young people need to study together to understand the modern world?

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[1] See Harold Rugg's *American Civilization and the Curriculum of the Social Sciences* (Bureau of Publications, Teachers College, Columbia University), John A. Hockett's *The Determination of the Major Social Problems of American Life* (Bureau of Publications, Teachers College, Columbia University), and Harold Rugg and John A. Hockett's *Objective Studies in Map Location* (Bureau of Publications, Teachers College, Columbia University).

In *Changing Civilizations in the Modern World,* therefore, historical, geographic, economic, and other materials are studied *in close relationship.* Whenever history is needed to understand the present, history is presented. If geographic relationships are needed to throw light upon contemporary problems, those geographic relationships are incorporated. The same thing has been done with economic and social facts and principles.

This has *not* caused a reduction in the amount of history or of geography included in the course. Rather, it has produced a sharp increase in the amount of these subjects in the curriculum, and in addition has added to the curriculum a wealth of new material. Comparisons of the amount of history and geography in these four *Reading Books* with that of conventional textbooks in these subjects *should be based on a study of the total series and not on any one book.*

THE USE OF THE DRAMATIC EPISODE

The readers of this book will encounter a second novel characteristic: *the frequent use of dramatic episodes.* If young people are to be brought to an understanding of our complicated civilization, it must be chiefly through the medium of words. Hence the imperative need of dramatizing the past and present story of the important modern civilizations and their relations to one another. In this course each topic is illustrated by vivid episodes and by a wealth of maps, graphs, and pictorial material far in excess of their present use in textbooks. The substitution of this vivid episodical treatment for the encyclopedic one which characterizes many of our current school histories and geographies has necessitated a marked increase in the volume of reading material.

"Learning by Doing": the *Pupil's Workbook of Directed Study*

The very center of this course in the social studies is the *Workbook*. The chief goal of the social studies is active and intelligent participation in American civilization and tolerant understanding of other civilizations. To guarantee the attainment of this goal the school must organize its work around a core of dynamic pupil activities. *Young people grow in understanding only by participating actively in the study of the society around them.* Even to the present day the work in the social studies has consisted too much of memoriter recitation from the contents of encyclopedic textbooks in history, geography, and civics.

The very essence of this new course in social studies is a succession of pupil activities, dynamic and thought-provoking. Many optional suggestions for these activities are incorporated in the *Workbook* and presented as a series of problems. Each problem of this course is an organized scheme of things for the pupil to do. Each unit compels him to find the answer to one or more important questions. The course, as presented in the *Workbook*, therefore, constantly confronts the pupil with stimulating problems, insight into each of which is important for an adequate understanding of the problems of the modern world. Hence the *Workbook* is the very core of the course, and the *Reading Book* has been constructed, unit by unit, in close conjunction with it.

Planned Repetition

The fourth characteristic of this course is the carefully planned recurrence of important concepts, generalizations, and historical themes in varied settings. One of the besetting weaknesses of current school courses in history, geography, and civics is lack of planned repetition. In the present course this defect has been remedied by designing the entire course in terms of a carefully planned scheme of repetition. In preparing each topic of the course the outstanding concepts, generalizations, and historical themes that an educated mind should understand have been charted in advance. Episodes, narratives, statistical and graphic exhibits, pictures, and maps have been selected with the need for the illustration of these items clearly in mind. Hence the student will encounter the important meanings, principles, and movements over and over again, but constantly presented in new and varied settings.

HUNDREDS OF SCHOOLS HAVE COÖPERATED IN THE PREPARATION OF THIS COURSE, 1922–1929

How can one feel sure that this course, which on superficial examination may appear to be difficult, is within the comprehension and ability of the pupil?

It has passed through three experimental editions — the first was used in mimeographed form, 1921–1922; the second consisted of printed books used in 1922–1923 in more than 100 school systems; the third consisted of completely reconstructed printed books (known as the *Social Science Pamphlets*) used in more than 300 school systems, 1923–1929.

This series of books could not have been developed successfully without the coöperation of a very large number of public and private schools. Hundreds of schools, located in more than forty states, have purchased and tried out under our direction copies of the experimental editions. In all, more than 600,000 copies of the *Social Science Pamphlets* were used by pupils between 1922 and 1929.

Furthermore, this present book has been written with a much simpler vocabulary than was used even in the third experimental edition. A scientific analysis of the completed manuscript shows that it falls within the comprehension of *sixth-grade* pupils.

Every kind of community in the United States — small towns, medium-sized cities, large cities — has made experimental use of these books. More than 50,000 tests taken by pupils have been returned to us for examination. The judgments of more than 1000 teachers have been obtained, concerning needed revisions. Many round-table conferences have been held with small groups of teachers using the experimental editions. The theory of the course has been discussed with hundreds of audiences in the past seven years. Debates have been held with specialists in history and geography. Furthermore, careful measurements have proved that several thousand pupils studying the experimental edition achieved a markedly superior understanding of modern life and a distinctly higher ability in thinking about it than a group of 1500 pupils who had studied under similar conditions the conventional history-geography-civics courses.

THE COURSE IS BASED UPON AN ELABORATE PROGRAM OF RESEARCH [1]

Twenty-two thorough investigations have been made dealing with the following topics:

1. Thirteen studies of what to teach of the problems of contemporary life, of the chief trends of civilization, and of the central concepts and principles which educated minds use in thinking about them.
2. Three scientific studies of grade placement of curriculum materials and of the development of pupil's abilities.
3. Six studies of learning and of the organization of curriculum materials, which have also contributed to the arrangement of the material in this course.

THE NEED FOR A LARGE ALLOTMENT OF TIME FOR THE SOCIAL STUDIES

Finally, no adequate course in the social studies can be developed successfully in the time now allotted to it in most public and private schools. Our elaborate program of research and our seven years of work with experimental editions prove conclusively that *more* than 60 minutes of daily class time must be devoted to the social studies in order that young people may obtain even a partial understanding of modern civilization. The social-studies course should be the intellectual core of the school curriculum. It is earnestly hoped that schools will provide adequately for this central core by allotting to it a large amount of time.

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[1] The entire nine years' investigational work is reported in a forthcoming monograph, *American Civilization and the Curriculum of the Social Sciences* (Bureau of Publications, Teachers College, Columbia University). It will also be summarized in *The Psychology and Teaching of the Social Studies* (in preparation). Of the studies upon which this course is based the following have already been published: C. O. Matthews, *Grade Placement of Curriculum Materials in the Social Studies* (Bureau of Publications, Teachers College, Columbia University); Harold Rugg and John A. Hockett, *Objective Studies in Map Location* (Bureau of Publications, Teachers College, Columbia University); Hyman Meltzer, *Children's Social Concepts* (Bureau of Publications, Teachers College, Columbia University); Earle Rugg, *Studies in Curriculum Construction in the Social Studies* (State Teachers College, Greeley, Colorado); "The Social Studies in the Elementary and Secondary School," Part II of the Twenty-second Yearbook of the National Society for the Study of Education (Public School Publishing Company); Neal Billings, *A Determination of Generalizations Basic to the Social Science Curriculum* (Bureau of Publications, Teachers College, Columbia University).

An Important Caution about Accuracy in Using Facts

In this book there are many statements of fact concerning population, areas of countries and regions, amounts of coal, iron, and other raw materials produced, numbers of miles of railroad track, etc. These facts are necessary for an understanding of modern civilizations. We have tried to make sure that the facts are stated accurately. One difficulty has been encountered, however: that even the most reliable sources from which the statistics and other facts have been selected,— for example, the census publications of the United States government, the Statistical Abstract of the United States, the Statesman's Year-Book, etc., — do not always agree. It was necessary, therefore, to choose among them those statements which appear to us to be most accurate.

The reader will note the frequent use of round numbers in statements of number of inhabitants, amounts of production, distances, areas, etc. In most cases it is not important to remember the exact figures; it *is* important, however, to obtain a correct impression from the use of the facts. Hence approximate numbers and estimates have been frequently used. The student should constantly ask himself, How reliable are these facts? He should learn that in the past 100 years the scientific way of doing things has made our records more and more accurate. Nevertheless, much improvement in this matter is still needed. In spite of great care in checking the facts that have been given, the reader may find instances in which correction should be made.

In Acknowledgment

This enterprise could not have been developed without the coöperative support and friendly and critical advice of many persons. First, there are several thousand progressive administrators and teachers who contributed criticisms and suggestions. From 1922 to 1929 inclusive these educational leaders gave unsparingly of their energy to the experimental trial of the tentative editions of these books. By their courage and vision in utilizing novel materials in the social sciences, they have put the children of American schools as well as myself in their debt.

Second, there is the administration of Teachers College, Columbia University, and of the Lincoln School. The American children who will use these materials owe a debt of gratitude to the deans of Teachers College and the directors of the Lincoln School for permitting and encouraging the development of this course by experimental methods.

I have acknowledged with pleasure in the body of the text many instances of coöperation from publishing houses who permitted quotations from their publications and the reproduction of illustrative materials. Almost without exception requests for coöperation of this character have been cordially granted. Especially am I indebted to the Keystone View Company for their unfailing courtesy and generosity in supplying many pictures which have added to the attractiveness of this book.

I wish, however, to recognize now specifically one kind of assistance obtained from other publications not acknowledged in the body of the text. In several instances eyewitnesses' accounts of travels in other lands provided the dramatic first-hand materials from which descriptions have been written for this book. I wish to acknowledge my indebtedness to several of these travelers and their writings for aid in preparing the following descriptions: (1) Facts in the description of Le Creusot were taken from Edward Hungerford's "Le Creusot, France's Crucible," *Our World*, October, 1922. (2) The description of the Ruhr steel district was based upon an account by Frederick Simpich, "The Story of the Ruhr," in the *National Geographic Magazine*, May, 1922. (3) The descriptions of the jungle and of the Chilean desert were written from

Charles Domville-Fife's *Real South America* (George Routledge & Sons, Limited, 1922). (4) Hiram Bingham's *Across South America* (Houghton Mifflin Company, Boston) contributed material for the description of Rio de Janeiro. (5) The facts in the description of the Brazilian coffee plantation are from G. J. Bruce's *Brazil and the Brazilians* (Dodd, Mead & Company, New York).

Without the unfailing encouragement of my friends John R. Clark, Marshall Dunn, George Nugent, R. P. Nugent, Jr., and Jesse H. Newlon, it would frequently have been difficult to carry on.

I have listed on the following page the names of the members of the research and editorial staff who contributed studies and materials to the various editions of these books. In the preparation of this edition, however, several of my associates have given such conspicuous and loyal assistance that I wish to acknowledge their contribution more specifically. First, Gertrude M. White, who has carried the burden of office management during the past four years; second, Joan Walker Coyne, who gave unsparingly of her time and energy to the reconstruction of *Changing Civilizations in the Modern World*; third, my colleague James E. Mendenhall, collaborator in the preparation of the *Pupil's Workbooks of Directed Study* and *Teacher's Guides*, who also reviewed critically the manuscript of each of the *Reading Books*. Finally, I wish to render special acknowledgment for the valuable editorial services of Frances M. Foster, assistant in the preparation of final manuscripts and in the reading of proof from 1923 to 1927, inclusive, and from 1928 to date. The present form of *Reading Books, Workbooks*, and *Teacher's Guides* owes more than I can measure to her editorial insight and constant labor.

This statement of my indebtedness should not be permitted to close without referring to the unsparing efforts of the staff of Ginn and Company to produce a practicable, attractive, and teachable body of materials. But especially I wish to express my appreciation for the encouragement and support given by Messrs. Charles H. Thurber, Henry H. Hilton, and Burdette R. Buckingham.

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CONTENTS

UNIT I

INTRODUCING THE STUDY OF MODERN CIVILIZATIONS

CHAPTER PAGE
I. Introducing the Study of Modern Civilizations 3

UNIT II

EUROPE BEFORE THE INDUSTRIAL REVOLUTION

II. The Narrow World of the Europeans before the Industrial Revolution 23

UNIT III

HOW ENGLAND BECAME MODERN INDUSTRIAL GREAT BRITAIN

III. How England changed from the England of Manors to Modern Industrial Great Britain 51
IV. How Great Britain became the Pivot of World Trade . . . 79
V. Great Britain made India the Center of a World Empire . . 106
VI. The British Empire: Possessions in the Mediterranean and Africa 133

UNIT IV

FRANCE: BOTH FARMER AND MANUFACTURER, THE WORLD'S SECOND LARGEST EMPIRE

VII. France: A Country of Agriculture and Manufacturing . . 165
VIII. How France built the Second Largest Empire in the World 195

UNIT V

GERMANY: A POWERFUL INDUSTRIAL NATION AND THE CENTER OF EUROPEAN TRADE

IX. How Germany became a Great Industrial Nation 217
X. Germany's Small Empire and her Great World Trade . . . 244

UNIT VI

THE AGRICULTURAL COUNTRIES OF EUROPE

CHAPTER PAGE
XI. Russia: A Vast Empire peopled by Peasants 272
XII. The Russian People: More Farmers than Manufacturers 293

UNIT VII

HOW THE GEOGRAPHY OF EUROPE MADE THAT CONTINENT THE WORLD'S GREATEST INDUSTRIAL AND COMMERCIAL REGION

XIII. Europe: The Greatest Industrial and Commercial Region of the World 321

UNIT VIII

EUROPE FROM 1914 UNTIL TODAY

XIV. The Interdependence of European Countries in 1914 . . 337
XV. How the World War changed European Countries 363
XVI. How Europe is recovering from the World War 384

UNIT IX

CHINA: A CHANGING AGRICULTURAL CIVILIZATION

XVII. "The Unchanging Chinese," a People with Thousands of Years of History 415
XVIII. How Old China Lives and Works 433
XIX. "The Changing Chinese" 455

UNIT X

JAPAN: AN ANCIENT ISLAND COUNTRY WHICH IS BECOMING A MODERN INDUSTRIAL NATION

XX. Japan: An Ancient Island Country 477
XXI. Japan Today 494

UNIT XI

HOW THE HOME OF ANCIENT CIVILIZATION BECAME MODERN LATIN AMERICA

CHAPTER PAGE
XXII. Latin America: How Europeans changed Indian Civilizations 525
XXIII. South America: A Continent of Contrasts 544
XXIV. The A B C Countries of South America 561

UNIT XII

SUMMING UP CHANGING CIVILIZATIONS IN THE MODERN WORLD

XXV. Contrasts between Industrial Countries and Agricultural Countries 583
XXVI. Changing Civilizations in the Modern World 595

APPENDIX 613
PRONOUNCING VOCABULARY 622
INDEX 627

LIST OF COLORED MAPS

Australia . . . . facing 96
Africa . . . . facing 140
Europe . . . . following 328
Asia . . . . following 424
North America . . . . following 552
South America . . . . following 552

CHANGING CIVILIZATIONS IN THE MODERN WORLD

UNIT I

INTRODUCING THE STUDY OF MODERN CIVILIZATIONS

CHAPTER I

INTRODUCING THE STUDY OF MODERN CIVILIZATIONS

I. How Many People are there in the World?

Mr. Harris opened the meeting of the Social Science Club of the George Washington Junior High School with an abrupt question. "How many people," he asked, "do you think there are in the world?"

John Rogers, who was always ready with an answer, spoke before a hand went up. "Ten million," he guessed.

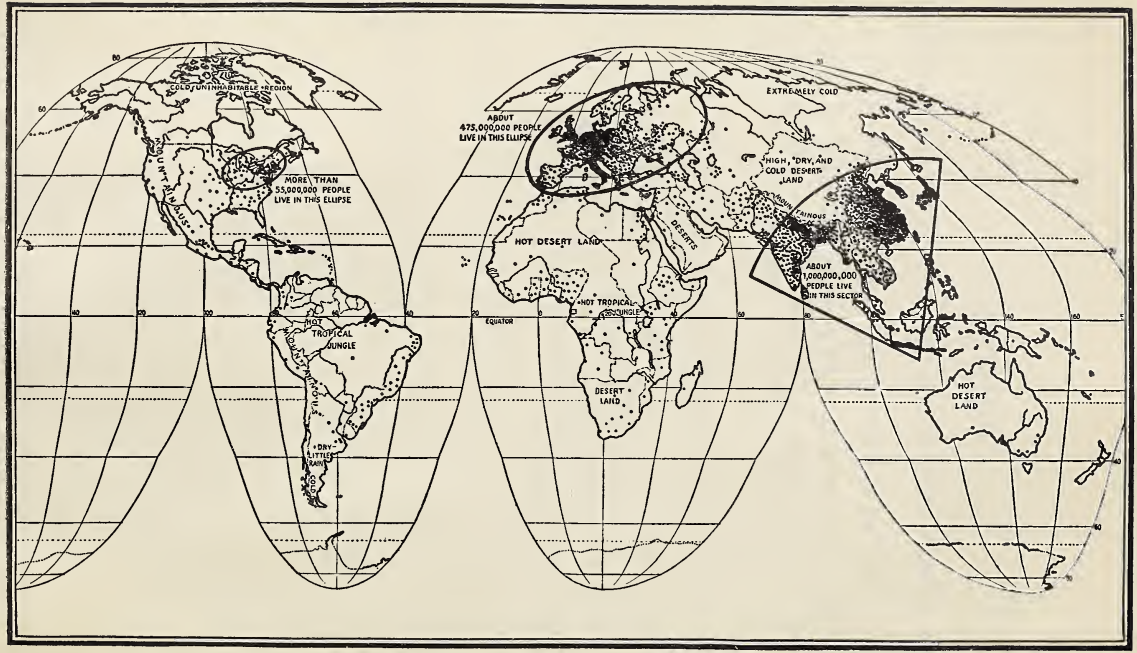
"Why, John" said Betty Warwick, in a chorus of "Oh's" from the club, "what a foolish answer! There are almost ten million people in Illinois alone, and we know there are more than 115,000,000 in the United States. Mr. Harris, there must be three or four hundred million."

Other answers were given, some as low as Betty's, others as high as ten billion. Mr. Harris wrote them on the board in a table that looked like this.

Number of People in the World	Number of Pupils who gave the Answer
10 million	1
200 million	4
300 million	3
500 million	5
700 million	2
800 million	4
1,000 million	8
1,500 million	3
1,800 million	3
3,000 million	2
4,000 million	1
6,000 million	1
10,000 million	1

What do *you* think? Which answer is most nearly correct? Before you turn to the next page, try to estimate the population of the earth.

You know, for example, the population of the United States. Perhaps you also have an idea of the population of Great Britain, Germany, Russia, China, or India. These are the largest countries of the earth. In addition there are many people in the smaller countries of Europe, in Asia, in North America, and in South America. Add together the populations of all the countries


COLD UNINHABITABLE REGION
MOUNTAINOUS
MORE THAN 55,000,000 PEOPLE LIVE IN THIS ELLIPSE
HOT TROPICAL JUNGLE
MOUNTAINOUS
DRY LITTLE RAIN
COLD
ABOUT 475,000,000 PEOPLE LIVE IN THIS ELLIPSE
HOT DESERT LAND
DESERTS
HOT TROPICAL JUNGLE
EQUATOR
DESERT LAND
EXTREMELY COLD
HIGH, DRY, AND COLD DESERT LAND
MOUNTAINOUS
ABOUT 1,000,000,000 PEOPLE LIVE IN THIS SECTOR
HOT DESERT LAND

Goode's Homolosine Projection

FIG. 1. Each dot on the map shows you where 10,000 people are living. Within the three outlined areas five sixths of the people of the world are living

which you know and make a total estimate. Now check your answer against the estimate given in the next section. How nearly right were you?

II. WHERE ARE PEOPLE LIVING ON THE EARTH?

The three centers of dense population

Where do these millions of people live? Are they scattered evenly over the earth? From the map of figure 1 you can obtain the answer to these questions.

Find the three areas of dense population: first, southeastern Asia; second, Europe; third, the United States. Where there are a great many dots, millions of people live massed together. Where there are few dots people are scattered far apart. The very blackest places mark the region of larger cities and towns.

In these three small regions live 1,500,000,000 of the earth's 1,900,000,000 people.[1] *Five sixths of the people of the earth live on one fourth of the land area.* Let us examine these three centers more closely.

The first center: southeastern Asia

Note carefully the most densely populated area, that of southeastern Asia. Imagine that you are putting the point of a compass just south of the island of Java in the Dutch East Indies. Fix a radius of 3600 miles, and draw an arc like the one on the map of figure 1, cutting across Asia from Japan to western India. Now draw imaginary lines connecting the two ends of the arc with the center south of Java.

In that small area live nearly one billion (1,000,000,000) people — Chinese, East Indians, Japanese, Hindus, and others. Nowhere else on the earth are so many people crowded into an equal area. Not in America! Not in Europe! Not in Africa nor Australia!

Some of them live in great cities, such as Tokyo and Shanghai (which have populations around 2,000,000) or Peiping (Peking), Calcutta, and Bombay — each with more than a million people.

Most of these people, however, are not living in cities. They live in countless small villages. Most of them have never seen railroad trains, automobiles, telegraphs, telephones, nor radios. Their houses are not comfortable structures of stone, brick, or concrete. Their villages are not places of machine manufacturing.

---

[1] We shall use the round number 1,900,000,000 as an approximate estimate of the total population of the earth. This is based upon recent reports of the United States Bureau of the Census.

Many of them have not even heard of the mechanical things of our machine civilization, for they cannot read or write. They have no newspapers, no magazines, and no books.

Can you imagine a billion people living in ways so different from ours? In China 435,000,000 people swarm on the coast plains of eastern Asia. On the little Japanese islands there are 60,000,000 more. In Indo-China and the islands of the East Indies are 100,000,000 more. In India's fertile valleys about 319,000,000 people are crowded together. The area of this region, which we have marked on the map, is only twice as large as that of the United States; yet *its population is eight times as great as ours.*

The second center: Europe

The area of the oval (see figure 1) inclosing Europe is about half as large as that of the Asiatic region. And half as many people (about 475,000,000) live there. There are the British on their "tight little island," who number 44,000,000. There is France with 40,000,000, and Germany with more than 60,000,000. And there is vast European Russia with 147,000,000 more. Thirty countries altogether with nearly a half-billion people.

The third center: the United States

The third crowded area is familiar territory — the United States. You have already studied its size and population. You know about its crowded industrial section of manufacturing cities and towns. You know about its broad agricultural belt, where many people are living but where few are really crowded. You know about its great grazing plains and mountain plateaus, where few people live. While the United States has not nearly so many people as either of the other two areas that we have examined, it is nevertheless the third most densely populated region on earth.

III. Why is Most of the Earth thinly Populated?

Look at the map of figure 1. The rest of the earth outside these three areas of dense population contains comparatively few people. In South America and in parts of Africa fairly large numbers are living; but there are vast regions which are almost entirely uninhabited. Are you not struck by the complete absence of dots in five huge regions? Here, in areas totaling millions of square miles, almost no human beings live.

Note these regions carefully: first, the vast expanse across northern Asia, more than 3600 miles long and 1000 miles wide, sheltering very few people; second, a region thinly populated in the extreme northern part of North America; third, a fairly large bare spot across the northern part of South America; fourth, a broad strip across northern Africa; fifth, most of the continent of Australia. Every continent except Europe reveals at least one area that is thinly populated, and even in Europe the extreme northern strip is not crowded.

How does it happen that so few people live in these regions while so many crowd into the places that we have just been discussing? There are several reasons, but the most important are two very simple ones — the weather and the condition of the land. The reasons are stated on the map in simple phrases — "Extremely cold," "Uninhabitable region," "Hot desert land," "Hot tropical jungle," and "High, dry, and cold desert land — mountainous." These are all included, however, in the words "the weather and the condition of the land."

1. Do people live in the cold ice land?

Consider the population in the icy regions of either the arctic or the antarctic.

Far north and far south are vast wastes of ice-covered land that are not inhabited — and miles and miles of ice-bound seas. Neither land nor sea has been thoroughly explored. Men with dogs have sledded to the north and to the south pole. A few people in airplanes, our daring modern adventurers, have flown across these bleak, desolate regions; but no people live there.

People will not live where they are likely to freeze to death, and in these regions they cannot find wood or coal with which to build fires. It is easy to understand that people will not settle where plants and animals cannot live and where it is extremely cold the whole year round. Does that help to explain the scarcity of population in the extreme arctic and antarctic regions?

South of the most northern icy arctic regions, in the somewhat warmer northern latitudes, small groups of men and women live in widely separated places. In Greenland, northern Canada, and Alaska, for example, are a few Eskimos and people from Europe and the United States. The vast island of Greenland has about 14,000 persons living on it. The smaller one of Iceland has about 100,000. Across northern Europe and Asia scattered little hamlets can also be found. In these regions the sun shines both day and night during the short summer, but the winter is one long period of twilight and darkness. Stunted trees, berry bushes, and flowers may be seen in the short summer months. Fur-bearing animals can be trapped. Fish can be caught in the moving ocean below by chopping holes through the thick ice.

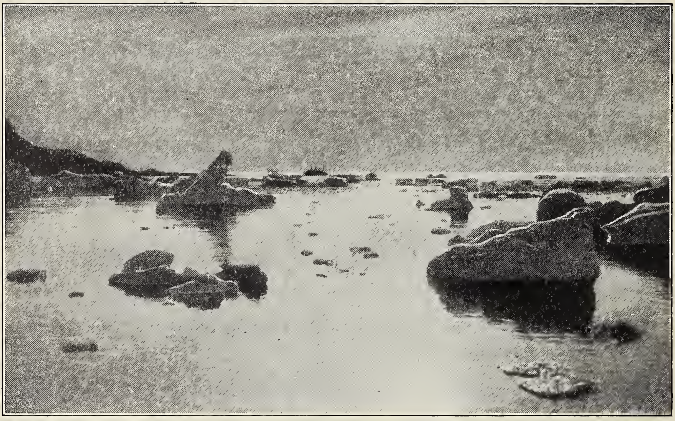


Fig. 2. This photograph shows a summer scene in the arctic region. Notice the barren land at the left side of the picture. The picture helps you to understand why so few people live in this part of the earth

However, throughout these vast northern regions few people live, since getting a living is difficult and uncomfortable.

2. Do many people live in the deserts?

On some of the blank places on the map of figure 1 is lettered "Hot desert land." This is a true description of much of Australia. Australia is a continent in itself, nearly as large as Europe, and yet only about 6,000,000 people live there. Why? Our answer is much the same as it was for the arctic regions — the weather and the land. About all that grows in the part of Australia that is desert is salt bush, and salt bush is not a very good diet.

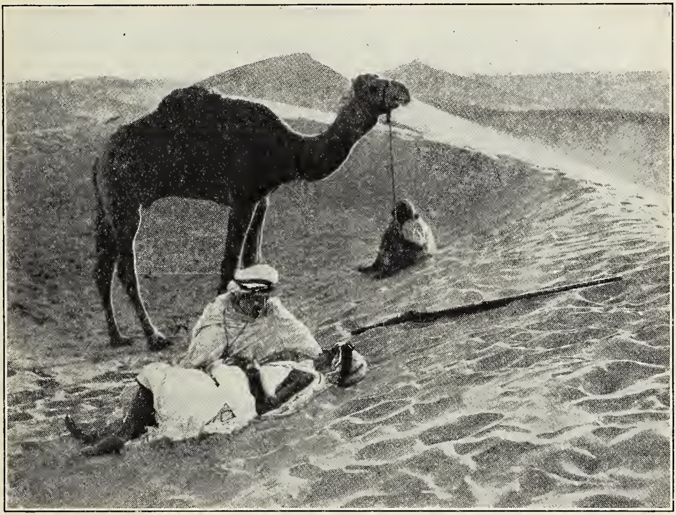


Fig. 3. On the Sahara Desert one can often travel a day or more over hills and valleys of broiling-hot sand without reaching an oasis where food and drink are to be found. It is not difficult to understand why few people live in the desert

As we have said, people settle and build homes where they can get food and shelter. Now food, as you know, does not grow in the deserts any more than it does in the ice lands. Consider the tremendous African Sahara Desert and the Arabian Desert, in parts of which not even explorers have dared to go because of the lack of water and food. In the parts we know about, scorching winds and dust clouds cross the vast stretches that lie unprotected beneath the glaring sun. Treacherous shifting sand dunes move slowly throughout hundreds of thousands of square miles. Here, except in a few fertile oases, there is no water to drink, and there are no plants or animals to eat. Here, day after day, the year round, the sun beats down upon the earth until the fine dust feels like stone beneath one's feet. The traveler's eyes become blind; his tongue dries until it is like a piece of cracked leather. And still the heat continues.

Do you wonder that most people avoid the hot, dry desert?

3. Is population dense in the tropical jungles?

There are two more large white spaces on the map. These are marked "Hot tropical jungle." One is in South America and the other is in Central Africa. One finds plenty of plants and animals as well as an abundance of water and sunshine. Does it not seem as if men should find here everything that they need to be comfortable and to live an easy life? Yet these great regions are thinly settled. It is a strange contradiction, indeed. How is it to be explained?

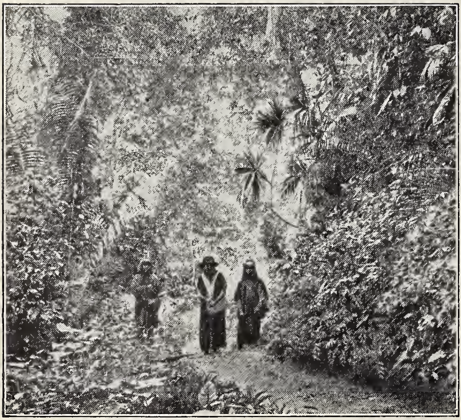


FIG. 4. This picture of the Amazon jungle can give you no idea of its heat and humidity or of the swarming insects which inhabit it; but you can see how difficult living is amid its too abundant vegetation. "Clearing the land" is almost impossible, for trees and vines spring up again with great rapidity. Because of all these things few people live in the jungle

Here conditions are the opposite of those in the ice fields of the far north or in the hot sands of the deserts. There life is not abundant enough for man's comfort. Here in many places it is *too abundant*. The jungle growth of vines and trees makes it difficult for men to clear away spaces for homes. No sooner have they cut down the dense growth in front of them and planted it with seeds than the cleared spot is a mass of vegetation again. They have no sooner killed a large number of snakes or wild and dangerous animals than another large number is upon them. Insects descend like black clouds. Rain falls without ceasing for weeks.

And the heat? It rises in waves, carrying steam from the moist earth up to the sky to be turned into rain again. It makes the air seem glassy and solid. It draws from the pores of human skins a continuous perspiration. It saps human strength and leaves men listless and tired.

People have to be very strong to keep up with nature in tropical jungles. They cannot feel vigorous and energetic in the terrific damp heat. Hence jungle life does not attract many people.

4. Do people avoid very high mountainous places?

Look again at the world map of figure 1. There are other uninhabited regions on the map to which we have not referred. One is the region in central Asia marked "High, dry, and cold desert land — mountainous." That vast territory is the highest part of the world. The land goes four thousand feet higher toward the sky than do the highest ranges of North America and South America. Few people live there, for it is very difficult to get a living.

In North America and South America and in Europe are other high mountainous regions where comparatively few people live. Note on the map of figure 1 the population of our own western mountains — the Rockies, Sierra Nevada, and Cascades. The population is thin all through that western region of the United States. There is a corresponding lack of people in the Andes Mountains of South America, and in the Alps in Europe. A few people live there, it is true. In the Andes, at a height greater than that of any mountain peak in the United States, one can find occasional Indian shepherds with their flocks. But these people are few and far between. Their way of life is hard and uncomfortable. Their huts are of rough stone with grass piled up against them to keep the wind out. Little food grows there.

Most people of the earth live in fairly temperate regions

It is clear, therefore, that both steady extreme heat and steady extreme cold drive men away. Extreme dryness, as in deserts, and extreme wetness, as in jungles, drive them away also. They avoid extremely high places and tend to live on the low plains.

Evidently men prefer to live where nature does not go to extremes — where nature is temperate. There aren't many Eskimos in the north, there are few Indian shepherds high in the Andes Mountains, population is scanty in the deserts, and not many men live in the tropical jungles of Africa or in the salt bush of Australia. Most of the people in the world have been able to find better places than these in which to live, places where it is easier to get food, to build homes, and to keep comfortable. They search out the regions where it is fairly dry but not too dry; where it is fairly warm but not too warm; where it is fairly wet but not too wet; and where it is fairly level.

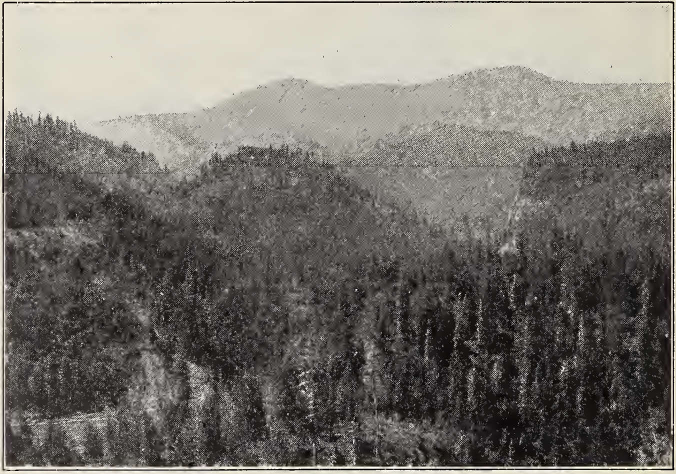


Fig. 5. This scene in the Rocky Mountains illustrates why few people live there. Because of the lay of the land, transportation, communication, and the cultivation of the soil are difficult. Very little vegetation can grow on the peaks. It is even impossible to get a living on some of the higher mountains of the earth which are covered with snow the year round. (Photograph by K. D. Swan. Courtesy of the United States Forestry Service)

For hundreds of thousands of years human beings have searched for the most livable places on the earth. They have wandered over every continent, hunting homes. Always they have tended to settle where the climate is mild and where food and drink are plentiful.

IV. Different Ways of Living on the Earth

You have learned that the peoples of the different regions of the earth do not live in the same ways. Their houses are different; their clothes are different; their customs, their governments, and their amusements are different. We say of them that they have built up different *civilizations*. Europe, as a region, appears to have one kind of civilization. Asia has another. In parts of North America and South America are others. In Africa are still others.

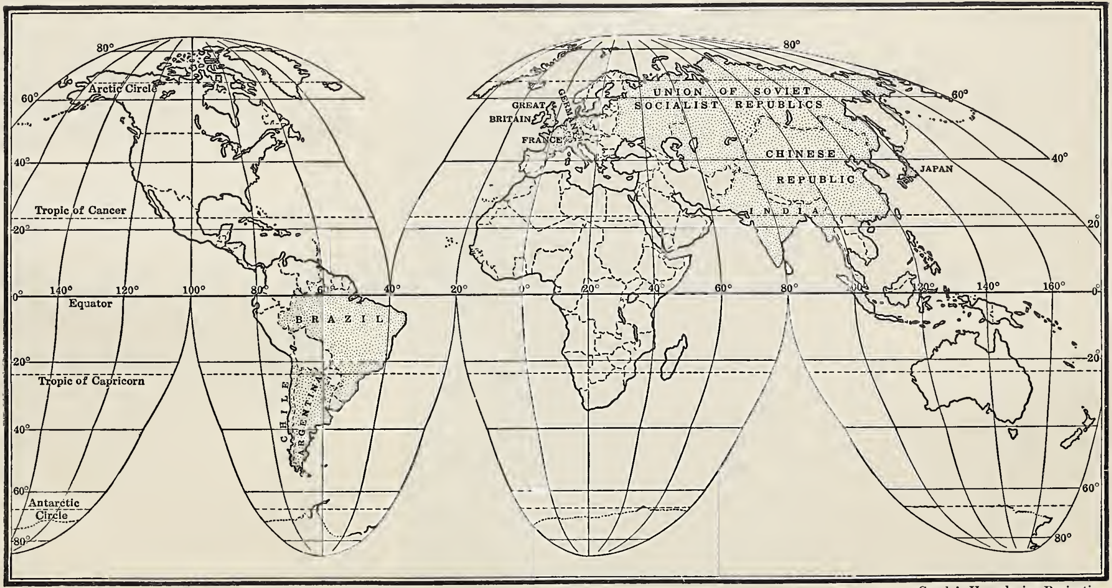
Within each of these regions, however, the separate countries also have very different ways of living. The French people are different from the Germans, or the Swiss, or the Spaniards, or the Italians, all of whom live close to the boundaries of France. In Asia, the Chinese and Japanese — near neighbors — live very differently. Each country speaks its own language (or languages), cooks its food and builds its houses in its own way, and has its own recreations. Each one, we say, has its own civilization.

The two chief kinds of civilization: (1) industrial, (2) agricultural

Although there are many differences between the peoples of the earth, it will help us if we think of their ways of living as either (1) industrial or (2) agricultural. Let us illustrate what is meant by these two terms.

In our study of the ways of living in the United States in *An Introduction to American Civilization*, we saw a good example of *industrial civilization*. We found that most of the people in the United States live in towns and cities. They depend upon power-driven machinery, mechanical transportation, and electrical communication. Craftsmanship has almost entirely disappeared, and even farming is carried on largely with the aid of machines.

People in some other parts of the earth are living in what we call an *agricultural civilization*. They live in farming villages. They have few factories and almost no engines or machines.


80°
60°
Arctic Circle
40°
Tropic of Cancer
20°
0°
140°
120°
100°
80°
60°
40°
20°
Equator
Tropic of Capricorn
Antarctic Circle
GREAT BRITAIN
GERMANY
FRANCE
UNION OF SOVIET SOCIALIST REPUBLICS
CHINESE REPUBLIC
INDIA
JAPAN
BRAZIL
CHILE
ARGENTINA
160°

Goode's Homolosine Projection

FIG. 6. The ten countries of the world about which we shall study are shaded in the map

Human and animal muscles or crude windmills and water wheels are their only sources of power. They trade little with outside communities, and trains or automobiles are almost unknown.

Throughout this book we shall study the best examples we can find of these two ways of life in (1) *industrial civilizations* and (2) *agricultural civilizations.*

To understand these forms of civilization we must study the countries which produced them.

The 1,900,000,000 people of the earth are divided among more than 70 countries. It is impossible, of course, for us to study each of these countries carefully. Even if there were time in your school hours or space in this book, you would not be able to remember even all their names. Certainly you could not remember their characteristics or the likenesses and differences between them. Therefore we must center our attention upon a few important countries.

THE TEN COUNTRIES THAT WE SHALL STUDY

I. The powerful industrial countries of Europe
    1. Great Britain
    2. France
    3. Germany

II. A changing agricultural country of Europe
    1. Russia

III. A rapidly industrializing country of Asia
    1. Japan

IV. The changing agricultural countries of Asia
    1. India
    2. China

V. The changing agricultural countries of South America
    1. Argentina
    2. Brazil
    3. Chile

We have chosen to study these ten countries for three reasons.

First, together they comprise more than 1,110,000,000 people — approximately two thirds of the inhabitants of the earth. Their modes of living, therefore, tell us how a vast proportion of the people of the earth live.

Second, these ten countries include people of the chief races of the earth and of the different kinds of civilization. They are representative of the others. By studying them we shall be learning the chief characteristics of the civilizations of the entire earth.

For example, Great Britain, France, and Germany are three of the four leading industrial nations. (You have already studied the fourth, the United States.) The manner in which these three countries have developed industrial ways of living illustrates the way in which it is now being developed in other parts of the world. Great Britain, France, and Germany, therefore, are representative industrial countries.

Similarly, Russia is representative of the changing life of a vast population in eastern and central Europe.

So, too, India and China are the representative agricultural civilizations of the Orient.

Third, these ten countries have been chosen because they, with the United States, will undoubtedly play a most important part in the modern world during your lifetime. This is shown clearly either by their vast land area and their large population or by the increasing development of their power resources. Great Britain, France, and Germany have already played the leading part in spreading European ways of living over the earth. Russia has one of the world's largest populations and controls a vast territory stretching across one continent and into another. India, China, and Japan are coming out of their long withdrawal from the modern world and are beginning to play a more important part in its affairs. Argentina, Brazil, and Chile are the leading countries of the vast South American continent. They have changed so rapidly in the past few years that already they have become the largest food-selling region in the world.

As a future American citizen you will depend increasingly upon these countries. It is of the greatest importance that you understand their civilizations.

We shall study briefly the "history" as well as the "geography" of each civilization

To understand these changing civilizations in the modern world *we must see and feel them changing.* We must see what they were in somewhat earlier times. We must try to understand the factors that have helped them to change. We must comprehend their chief characteristics today. Thus, only by studying how they have changed or are changing their civilizations, only by contrasting clearly what they were in former times with what they are today, can we understand them.

This is especially important because today peoples all over the earth are changing their ways of living. During the past hundred years the countries of western Europe have been changing from agricultural to industrial civilizations. More recently the peoples of eastern Europe, southern Africa, and South America have begun to go through these same changes. Today all over the Far East, ways of working, means of transportation and communication, social life — all are undergoing rapid change. Hence it is important to study the history of each of these civilizations and to compare their modes of living at various times with those of today.

We shall consider first the narrow world of the people of the Middle Ages. We shall have a brief glimpse of life in Europe and Asia before the Industrial Revolution began. This is the task of Chapter II.

Then in successive units of work we shall see how many countries of the world changed from agricultural to industrial countries after 1750, and how many others are changing today.

Turn through the whole book rapidly. Scan the chapter titles and the principal topic headings to see the scope of our work.

IMPORTANT QUESTIONS WHICH WILL GUIDE OUR STUDY

As you study each civilization — British, French, German, Russian, East Indian, Chinese, Japanese, and Latin American — try to answer the following important questions:

1. Is this country an agricultural or an industrial country? To what extent has the Industrial Revolution already changed its civilization?
2. How does the standard of living of this country compare with that of the United States and of the other countries that I have studied?
3. How far are the people self-sufficient? How much do their lives depend upon those of other peoples?
4. What are the chief differences between the industrial and agricultural countries that I have studied? What are the chief similarities?

5. What is the distinctive thing about the civilization of this people? What are the characteristics of this people that distinguish them from all others?

6. What is there about the way of living of this people which I should like to see more of in my country?

In *An Introduction to American Civilization* you learned that one of the chief characteristics of industrial civilizations is their *interdependence.* We hope that before you complete your junior-high-school studies you will be able to explain

How it has come about that each part of the world depends upon other parts of the world, and that injury to one part affects the whole world

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION[1]

Books

BEEBE, WILLIAM. Jungle Days. G. P. Putnam's Sons, New York, 1925. An interesting book of life in jungle regions.

*HUNTINGTON, ELLSWORTH, and CUSHING, SUMNER W. Modern Business Geography. World Book Company, Yonkers, New York, 1925. A useful geography for reference work.

*VAN LOON, HENDRIK W. Man, the Miracle Maker. Horace Liveright, Inc., New York, 1928. You will be delighted by the text and pictures in this book, which show the cleverness of man, the inventor.

*VAN LOON, HENDRIK W. The Story of Mankind. Boni & Liveright, New York, 1921. You will wish to refer to this book, which is well written and well illustrated.

*WILLIAMS, ARCHIBALD. The Romance of Modern Exploration. J. B. Lippincott Company, Philadelphia, 1910. Dramatic stories of exploration in mountain, desert, jungle, and polar regions. See Chapters XVII–XX, XXII, XXV, and XXVI.

Magazine Articles

*"Beside the Bushman Werf," *Asia*, October, 1927, pp. 802–811.

*"By Seaplane to Six Continents," *National Geographic Magazine*, September, 1928, pp. 247–301.

*"Crossing the Untraversed Libyan Desert," *National Geographic Magazine*, September, 1924, pp. 233–277.

*"Curious and Characteristic Customs of Central African Tribes," *National Geographic Magazine*, October, 1919, pp. 342–368.

"Eskimos under their Skin, as seen by Rasmussen," *Literary Digest*, April 30, 1927, pp. 37–44.

"Fighting a Myriad Perils in the Borneo Jungle," *Literary Digest*, January 21, 1928, pp. 41–46.

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[1] The references that are marked by a star are especially good.

"From England to India by Automobile," *National Geographic Magazine,* August, 1925, pp. 191–226.
"From London to Australia by Aeroplane," *National Geographic Magazine,* March, 1921, pp. 229–339.
*"Man and Nature in Hot Climates," *Asia,* October, 1927, pp. 823–829.
"Mt. Everest to be Attacked Once More," *Literary Digest,* October 4, 1924, pp. 39–40.
"Nature and Man in Ethiopia," *National Geographic Magazine,* August, 1928, pp. 121–176.
"Nineteen Degrees South of the North Pole," *Asia,* July, 1925, pp. 573–581.
"Outwitting Death in the Red Desert," *Literary Digest,* May 10, 1924, pp. 36–46.
"Seeing the World from the Air," *National Geographic Magazine,* March, 1928, pp. 349–384.
*"The *Bowdoin* in North Greenland," *National Geographic Magazine,* June, 1925, pp. 677–722.
*"The Romance of Science in Polynesia," *National Geographic Magazine,* October, 1925, pp. 355–426.
"The Warfare of the Jungle Folk," *National Geographic Magazine,* February, 1928, pp. 233–268.
"Through the Deserts and Jungles of Africa by Motor," *National Geographic Magazine,* June, 1926, pp. 651–720.

UNIT II

EUROPE BEFORE THE INDUSTRIAL REVOLUTION

CHAPTER II

THE NARROW WORLD OF THE EUROPEANS BEFORE THE INDUSTRIAL REVOLUTION

How large is the world in which you live today?

"What an absurd question!" you may think. "How large is the world in which I live? Why, as large as the earth itself."

Yes, that is probably true. Most boys and girls in the junior high school really know something of the six continents and the "seven seas," the chief countries and the large cities of the earth, the mountains, the plains, and the deserts.

Two happenings in the past centuries have made that knowledge possible. First, nearly all the earth has been explored by men. Second, swift transportation and communication bring information to you daily from all parts of the earth.

In the morning newspaper you read items from San Francisco, Boston, London, Paris, Cairo, Peiping, Rio de Janeiro, or Cape Town. You read the radio accounts of the explorers who are charting new continents at the south pole. You seldom remember that your woolen suit may have come from the backs of English sheep, or your silks from China or Japan. You do not reflect that you are dining at a table covered with Irish linen, and drinking coffee from Brazil, served in cups made in Canton, China.

Today, because of the results of the Industrial Revolution, the entire earth is indeed your world. You can keep in touch with practically all of it.

Did the people of earlier times, say, of 1100, have a world as large as ours?

Perhaps you smile at that question, for you know that the earth itself has grown or shrunk very little since 1100. At that time the same continents were surrounded by the same oceans and seas; people fished or sailed the same rivers and climbed the same mountains. The Chinese lived in their junks and built their curly-roofed temples. The Japanese held their cherry-blossom festivals. Pilgrims in India bathed in the Ganges River, and lived on the same rice diet. In 1100 people in Europe lived in the same general locations as they do today, although there were not so many people, nor so many towns and cities.

Suppose you were able to turn back the pages of history to a morning in 1100. You find yourself in England. You meet a farmer and ask him, "What is *your* world?" Can he answer you, "My world is the whole earth"?

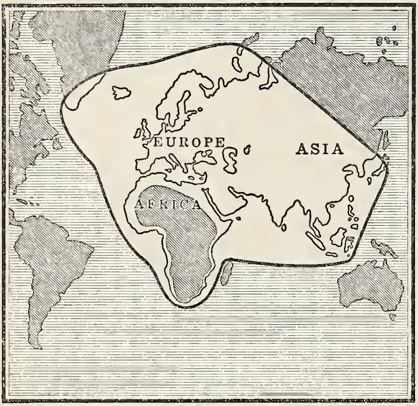

Fig. 7. The line which incloses Europe and parts of Asia and Africa indicates the lands which were known to a few scholars as the "world" in the Middle Ages. The darkened area within the line had not yet been explored

No, indeed, for only a small part of the earth was known to Europeans in 1100. You ask him if he knows of China in the far, far East. He remarks that he has never heard of such a country. You ask the same question of a nobleman whom you meet. He answers you as the farmer did, for the world of even the most educated European was indeed a narrow world.

The known world of the Europeans of 1100 was very small. It was still the Middle Ages, that long period of time which elapsed between about 400, when the Romans lost their control of Europe, and 1500 or 1600, when modern times began. A few scholars had maps which showed a world as large as that of figure 7. It included most of Europe, a little of Asia, and a narrow strip along the north and west coast of Africa.

But to people who were not scholars, the little neighborhood in which they were born, with a few miles added perhaps to villages close by, was the entire world. They could not travel far or often. There were but few roads, and those were very bad.

Much of the land was forested, and life was not safe to one traveling alone. There were no railways, no ships except frail sailing craft, and, of course, no automobiles. An occasional trip on foot or on horseback to the next village was probably the greatest adventure of their lives. Such a trip was, indeed, a chance for the exercise of great daring and for the making of vast preparations, as well as the subject of much conversation for years afterwards.

Life in Europe in 1100

Let us imagine that we are back in the Middle Ages, flying over Europe. We can see the entire continent in a short time. We have flown in a magic airship from Alexandria, Egypt, across Europe to England. We have passed over Venice, the city of canals. We have exclaimed over scores of castles surrounded by little villages; we have looked down on Paris, dirty and huddled, but even now beginning to be an important European city.

Now we are over London, but we should never recognize it, for the houses are low, built of wood and roofed with straw. How odd everything seems! As we pass over the city there is not even the thinnest veil of smoke to dim our view. There is no roaring traffic. No trains go rushing in and out of stations. There are neither trains nor stations. We hear no tooting of automobile horns.

How quiet and sleepy these cities and towns are! Oxen lumber slowly through the streets drawing awkward carts. Heavily burdened little donkeys trot along.

But coming from the twentieth century, as we do, we are astonished to see no raging steel mills belching smoke, no factories, no electric telegraph wires, and no airplanes. Indeed, there are few towns and cities in the Europe that we have been seeing.

How, then, do most of the people live?

Most of the people in England live in little settlements called manors

We shall land at this great manor house ahead of us. We have noticed many of them as we sped along, and we are eager to see how the people live. The castle itself is a large, gray stone house built on a hill. There are fine fields and woods spread around it, a fish pond in the woods, and game among the trees for the lord of the manor to hunt. As closely as possible to the castle are grouped the tiny cottages of a little hamlet. They look so ill-kept and unsubstantial that they seem to need the castle to shield them. Beyond the hamlet are fields of grain and clumps of woodland. Beyond the fields a great forest stretches on all sides. There are no roads through the forest, only rough paths.

Let us look into the lives of these people.

Are the villagers of the manor free men who own their land and work for themselves?

Most of the land is owned by the *gentry*, as the nobles and knights were called, and the clergy. There are a few *freeholders*, that is, farmers who own small tracts of land. Most of the people in the village, however, belong to the lord of the manor, who has supreme power over them, except that he cannot buy or sell them. He inherited them, together with the land, from his father, and he must pass them and their descendants on to his eldest son.

These peasants can neither buy nor sell the land. They cannot even leave it. Like their ancestors, they were born on the land, and they will die there. They obey the lord, and in exchange for his protection they plow, cultivate, and harvest his land. Some of the produce they may keep for their own use, but they are obliged to give of their produce and animals whatever he demands. The lord wages war, and sometimes the peasants go out of the castle's shelter after a siege to find their fields ruined by the enemy.

A CENSUS OF THE ENGLISH PEOPLE OF ABOUT 1100

	Per Cent
Gentry and clergy	4
Freeholders of land	12
Serfs	70
Actual slaves	9
Others	5

As you can see by the table these peasants are much more numerous than the gentry. They are called *serfs*, and are divided into two classes — the *villeins*, or small farmers, who cultivate from 10 to 40 acres of land, and the *cotters*, or laborers, who work at many tasks for the lord and have only an acre or two of land to cultivate. There are some real slaves on the manor, but most of these are the personal servants of the lord and his lady.

How the land is divided and farmed

On the map of the manor (figure 8) you can see how the land is laid out. There are three divisions — woodland and waste, pasture, and cultivated fields. In the woodland and waste the peasants are allowed to cut turf and gather wood. Their cattle, swine, and horses can graze there, together with the live stock of the lord.

The fields look very different from our great open farms. They are divided into long, narrow strips, running in different directions. Each narrow strip is a part of one man's farm. Each villager farms strips of land in each of the fields, which lie on both sides of the road—the west field, the east field, and the north field.

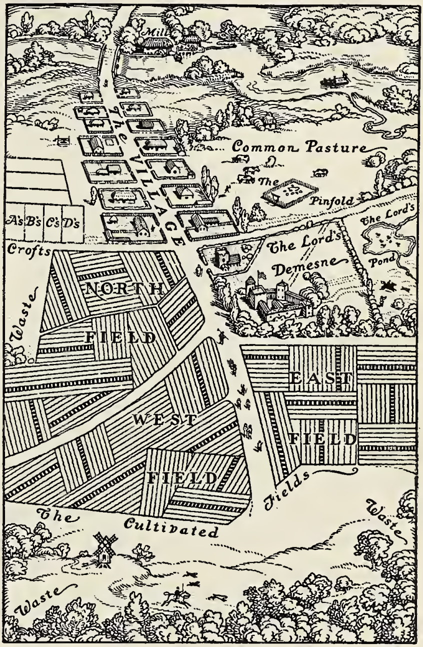
Mill
The Village
Common Pasture
The Pinfold
The Lord's Pond
The Lord's Demesne
A's B's C's D's
Crofts
Waste
NORTH FIELD
WEST FIELD
EAST FIELD
The Cultivated Fields
Waste
Waste

Fig. 8. The three large fields shown in the plan of this English manor belonged to the lord of the manor. The crofts were inclosed fields which belonged to the freeholders. In the pinfold were kept some of the domestic animals

Find the blackened strips shown in the map. There are seven in the west field, eight in the north field, and eight in the east field. These twenty-three strips are farmed by one man. Thus the land which one man cultivates is scattered over the entire manor, and a farmer has to travel from one field to another in order to farm all his land.

If you walk about the manor you will notice occasional strips unplowed and idle. You are told that perhaps this year certain fields will be sown to wheat, others will be sown to barley and oats, and still others will lie unplanted. This is known as "the three-field system." Usually only two fields of every three are planted, while the third rests. The landowners of 1100 are wise farmers! They know how to care for land and are careful not to wear it out by using it constantly. (Thanks to this wise system of farming, many of the fields of Europe which produced good crops in 1100 are still producing good crops today.)

How do the serfs pay the lord for the land they hold?

You may be sure that the serfs pay heavily for the land they hold. They have no money, but they pay in service. The lord lives luxuriously in his manor house, except when he sallies out to hunt, fish, or fight. He keeps for himself a large plot of land, which his serfs plant, cultivate, and harvest for him in addition to caring for their own. The work is divided among them, and each week they work a few days for the lord — the villeins usually three days, and the cotters one. When the seasons for planting or for harvesting come, the work is doubly heavy. Then they are sometimes forced to neglect their own fields at the time when a few days' delay means the loss of their own crops. They do not love the lords the more because of this, but they are helpless to rebel, for the lord and his soldiers are well armed and the serfs have no arms to use against them.

Not only must they cultivate the lord's fields, but they must give him a portion of their own cattle, milk, fowls, eggs, and garden products. A cardinal of the church who describes the life of these people says that many lords forced their serfs to labor and did not give them even bread to eat.

> Many [of the gentry] say nowadays when they are rebuked for having taken a cow from a poor peasant: "Let it suffice the boor that I have left him the calf and his own life. I might do him far more harm if I would. I have taken his goose but left him the feathers." [1]

If a serf dies, the lord claims the best possession left by his dead tenant, while the parish clergyman claims the second best! Often the widows and orphans are left with almost nothing.

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[1] G. G. Coulton, *Chaucer and his England*, p. 216. G. P. Putnam's Sons, New York, 1908.

If a serf's daughter wishes to marry, the father must ask permission of the lord. If a villein wishes to sell a fine cow or an ox, he cannot do so without permission of the lord.

The Poverty of the Serfs

No doubt you are thinking that the life of a serf is not to be envied. Let us visit his house and see how he lives. His home is a poor, crude little hut, made of rough wood and mud, and thatched with straw. There is only one room and that has neither stove nor fireplace. The bare ground covered with straw serves as a floor.

The men and some of the women come in from the fields. In the hut which we are visiting the mother places before the family a large pot of boiled cabbage and salt pork. Everyone dips into the pot with his fingers or with a piece of bread used as a spoon. Sometimes, they say, they also have fish or peas or berries. This is the chief meal of the day, perhaps the only one.

The clothing of the serfs is dirty, for there is little time for washing. A washing day would mean that the family would have to lie abed all day, for two sets of clothing are too great a luxury for them.

It is growing dark. No lights are used, except occasionally a mutton-tallow candle. Tonight, however, they are all tired; so they climb a crude ladder to the loft, where each one wearily throws himself upon a pile of straw to sleep until dawn.

Each Manor in 1100 was a Little Self-sufficient Community

We have spoken only of the farmers, but the village needed men to do other things besides farming. There was a smith to make the tools of the serfs and a miller to grind the grain in the lord's mill. A village fisherman caught fish for the serfs and for the manor house when the lord was not in the mood for fishing. Sheep were sheared and the wool was spun, woven, and made into clothing by the women of the village. There was even a court on the manor, where the lord presided as both judge and jury.

Not everything was to be had on the manor, however. The millstones had to be brought through the forests all the way from France. The lord ordered his fine coat of armor and his strong sword from Spain.

Then, too, new faces appeared in the village at long intervals. A peddler or a wandering musician might pass through. The peddler carried what was to the peasants a magic pack. It bulged with ornaments, silks, and spices from the Orient. How they longed to buy something from the great world outside, but they were too poor to make such purchases. The lord, and sometimes the freemen, alone could afford luxuries. The serfs were fortunate to have enough food.

The bards who journeyed from one manor to another sang songs, ballads of knights and ladies, and told tales of a strange world. The people's eyes gleamed as they listened and they drew deep breaths, for these songs were romance to them. The bard did not linger among them, however, for he knew he was to sing all night in the banquet hall of the castle. Do you begin to understand now the size of a European's world in 1100 and how lord and serf alike lived a shut-in life on a manor?

After about 1100 the closed manor life gradually disappeared; traders went about, towns and cities grew, and knowledge of the world spread

The closed-in life of the manor was not entirely unbroken, however. Occasionally there were fairs in neighboring villages; and to these the lord graciously allowed the villagers to go. Fair time was exciting, a welcome change to eyes long accustomed to seeing only familiar land and faces, a well earned rest to toil-worn hands and weary backs.

On religious holidays people from the manor went to the great church in the nearest town. After services there were plays in the church or processions and games in the streets. Then peddlers and merchants set up shop in booths along the street, displaying their wares and tempting people to buy. Necessities like meat, wool, salt, and fish were displayed, and also luxuries like wine, spices, silks, and jewels.

If a man from the manor had an extra sack of grain or a very neat piece of woolen cloth which he had made in his house, he might trade it with the merchant for a bit of silk for his wife to wear on Sundays. The merchants not only sold, they also bought for future trading elsewhere.

If the merchant refused to trade because the weaving was poor, the man might go home determined to finish a better piece of cloth before the next festival. He was willing to work harder, for he wanted much that he saw. He was shaken out of his rut by the fair; and when he returned to the manor, home seemed dull. So he became ambitious to change his way of living.

The fairs thus stimulated interest in making things. They helped to develop handicrafts. If the serfs learned how to weave a very fine piece of cloth or to pound out a beautiful metal ornament, or if they could carve bits of wood into handsome boxes, they could exchange these things for something they wanted more. From the trade they would have something of their own, perhaps a bit of money to put aside so as to be less dependent upon the lord.

Many crafts flourished in the towns of the Middle Ages

In England today almost everything is made by machines. In the Middle Ages, however, everything was made by hand, with the help of simple tools. Craftsmen — that is, skilled workmen — made the cloth and the clothing that people wore. They hammered out metals into the swords and armor that men used in warfare. They made the plows, the hoes, and the ovens that people used in their work. All industry, all manufacture, was carried on by hand by *craftsmen.*

The crafts were not carried on in separate factories, but in the homes of the workers. As craftsmen became more expert and could make a living by their craft alone, they began to move to the towns and cities where there were more people to buy their products — people who had money to buy jewels and clothing, people who wanted fine monuments erected to the honor of their family, or people who had fine homes to be decorated.

If the craftsman prospered, he had apprentices working with him under his watchful eye. Later these apprentices would leave him and become master craftsmen like himself. They would hire other apprentices and set up shop in their own homes.

There were no retail stores, almost no middlemen. The craftsmen did their own trading. As soon as a piece of work was finished it was sold and another was begun.

Handicrafts were regulated by Craft Guilds

When things are made by hand, no two pieces come out exactly alike, as they do when turned out by machines. No two workmen work at exactly the same speed. Besides, one workman may do much better work than another. So it was difficult to decide the exact amount that should be charged for a certain piece of work.

To regulate these things, workmen banded together into associations that were called *guilds*. They drew up rules as to the quality of work required, the price to be charged, and the number of years a boy must serve as apprentice to learn his trade before he was admitted to full membership in the guild.

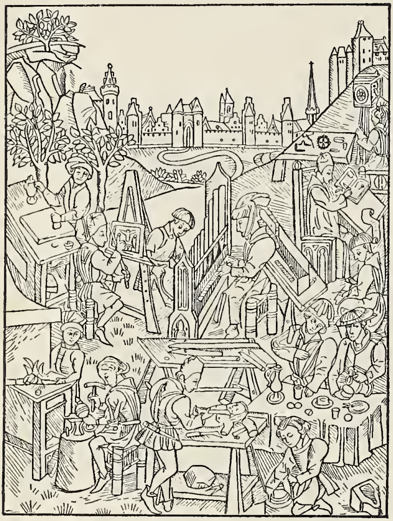

Fig. 9. If you look carefully you will find in this picture men working at their crafts. There is the goldsmith, the wood-sculptor, the painter, the organ-builder, the clock-maker and the scribe (who wrote for people who did not know how). All these crafts were to be found in London in 1470. (Redrawn from an old print)

A short list of the kinds of craftsmen of the later Middle Ages will give you an idea of the variety of occupations and of the *division of labor* that had already occurred. Among the people who handled food were butchers and skinners, millers and bakers, brewers and cooks — all skilled in the art of preparing many kinds of food. Metal-working showed as great a division of labor, with its horseshoers, blacksmiths, silversmiths, goldsmiths, tinsmiths, and coppersmiths. Many kinds of tools and implements were made by cutlers, shears-makers, ornamenters of swords, scabbard-makers, chain-makers, fishhook-makers, pin-makers, locksmiths, and grinders of knives. To provide the people with their clothing, there were weavers of silk, of woolen cloth, of linen cloth, and of canvas. Likewise there were many special garment-making guilds — sewers, tailors, lace-makers, etc. The building guilds were subdivided into masons, stonecutters, tile-makers, carpenters, tinners, and coopers. Already a vast system of trade was springing up.

So even in the Middle Ages labor was beginning to be specialized

Figure 9 gives you some idea of the variety of crafts in the Middle Ages. Figure 10 shows what beautiful work the craftsmen of the Middle Ages were doing in stone.

In some towns and cities certain crafts were more highly developed than in others. The Italian cities — Florence, Milan, Genoa, and Venice — were centers of very beautiful workmanship. They were wealthy cities where the people were better educated than in the rest of Europe, and where rich citizens encouraged the making of rare objects and luxuries. For example, Venice was famous for glassware, bronzes, laces, ornamented leather, and cloth from the looms — velvets, satins, and cloth of gold and of silver. Today the old Venetian glassware is very rare and is still considered very fine. The Venetians also discovered a dye, "Venetian red," which became famous during the Middle Ages.

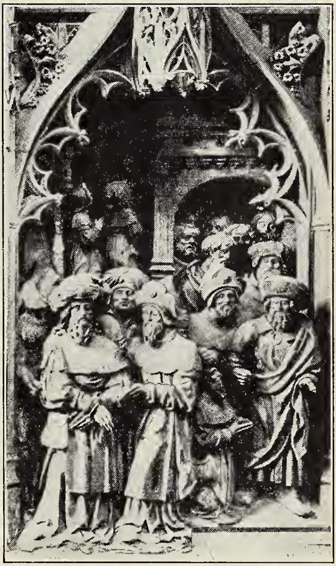

FIG. 10. An example of medieval sculpture on a cathedral in France

Evidently life in the towns was becoming much more varied and interesting than that on the manors. Many busy homes and shops must have been required to make all these products, and the kinds of work which these craftsmen did show us that some people must have been living in a fair degree of comfort.

THERE WERE SEVERAL LARGE CITIES IN EUROPE IN THE LATER MIDDLE AGES

1. London was becoming a city of busy streets, markets, and workshops

Throughout the Middle Ages London was a sort of rambling big town. It didn't look much as it does today. The streets were very narrow, and paved badly or not at all. There was a gutter in the middle of the street, but water was likely to overflow into the houses when it rained. Some quarters of the city were filled with beggars, and there were many thieves. Since there were no policemen it was unsafe to walk through the dark streets at night, and people seldom ventured out then.

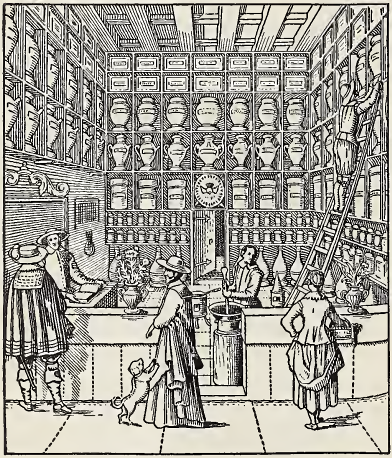

FIG. 11. In 1600 the stores in London were open booths. Compare this drug store with those one sees today. (Redrawn from an old print)

As the years went on and navigation and shipbuilding improved London gradually became bigger and bigger. It was becoming a bustling center of trade as well as a center of handicrafts. Everywhere houses and craftsmen's shops lined the narrow streets. Shops were open booths, as they are in Oriental cities today. Purchasers passing along the street chatted with master and men at their work. Trading was carried on in the open market with much bargaining over prices.

Merchants from foreign lands came together in London as in other European cities to buy and sell at the fairs. These fairs were held at regular periods, sometimes once a year, sometimes oftener. They were larger and had a greater assortment of goods than those held in the villages and towns. The merchants knew when these fairs were to take place, and they timed their arrival in England to bring their wares there from the continent of Europe and even from distant Asia. Some of the fairs, like those of Winchester, were really international centers of trade. Merchants from France and Holland planned regularly to go to the Winchester fair. There a great trade went on in wool and wine, spices, meats, fabrics, garments, and ornaments of many kinds.

So in the later Middle Ages towns were growing fast in England. London in 1327 had a population of 37,000, York of 12,000, Bristol of 10,000, Plymouth of 8000, Coventry of 8000, Norwich of 6000, and Lincoln of 5000.

THE ENGLISH CENSUS OF 1327

9 towns of over 5000 inhabitants
11 towns of 3000–4999 inhabitants
19 towns of 1000–2999 inhabitants
3 towns of less than 1000 inhabitants

2. Towns and cities were developing in France

Perhaps you thought that London, with its 37,000 inhabitants, was large. Imagine Paris, therefore, which in 1328 was a great city of about 200,000 people, engaged in scores of occupations.

Paris under Roman rule, 1400 years before, had been a soldiers' camp located on a small island in the Seine River. The Marne, the Oise, and the Yonne rivers flowed into the Seine from the west. Its location near these easy routes of transportation brought about its growth into a great city. After the fall of the Roman Empire the French kings chose Paris for their capital. It grew rapidly and soon spread out on both sides of the Seine.

Each year a great fair was held at Paris, which lasted for two months. Merchants banded themselves together into big companies to travel to these fairs. Because it was hard to carry goods over the rough roads, many of the merchants came by water. They came on the rafts and barges which went up and down the Seine and the rivers which flow into it. But Paris traded little with foreign cities. Most of her trade was with the many towns and farms along the rivers of France.

So the city grew into the greatest medieval center of trade and handicrafts in Europe. By the late 1300's Paris had a population of about 300,000.

3. The increase in handicrafts and in trade brought about the development of cities in Italy

In Italy there were several cities which, because of their location on the Mediterranean Sea, had grown to be great seaports. There was Venice, for example, built on little islands close to the Italian shore on the Adriatic Sea. It was not like most towns. Instead of high walls it depended on the sea for protection. Instead of rough and narrow streets through which the people walked, it had canals through which they traveled in small boats. The little islands were large enough for shops and houses, but not for farms or gardens; so the people had to gain their living in ways other than farming. They became fishermen, traders, and manufacturers.

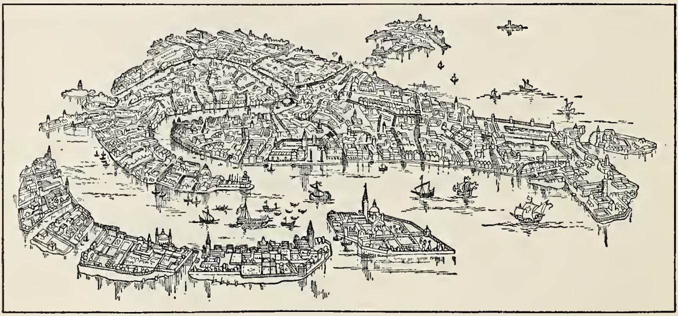

Fig. 12. In the Middle Ages Venice was already a large city. It was so crowded that there was little room to grow food. Canals took the place of highways, and anyone who wanted to visit a friend used a boat rather than a horse

The merchants of the city built many ships for trade with the Orient. Even as early as 1100 the Venetians had a fleet of several thousand ships. With such fleets they cleared the Adriatic Sea and the Mediterranean of pirates and made them safe for merchant ships. So trade grew between Venice and other parts of Europe.

One old record shows that in 1318 there arrived at the Belgian city of Bruges five Venetian cargo ships filled with goods to sell at the annual fair. They brought to Bruges silks and spices from India; cinnamon, sugar, and drugs from Morocco; pepper and spices from Egypt; furs and wax from Russia; and cloth of gold, silk, and furs from Tartary. On the return trip to Venice and the East the holds of the vessels were loaded with raw materials, such as hides, tallow, salt meat, fish, flax, timber, tin, and lead. The goods manufactured by the craftsmen of the west were also in demand in Venice. Some were sold there. Others were shipped on to the great city of Alexandria, near the mouth of the Nile River, where eastern merchants from Asia assembled at an annual fair. Later some of the cargo was transported overland even as far as India.

The Venetians purchased cargoes of raw materials from the ports of northern Europe and sold or exchanged these at ports in the Orient. Buying goods by the boatload meant that they must risk a fortune on each venture. Often their boats did not return to Venice for a whole year, and often, too, they were destroyed by storms or pirates.

To carry on such trade, the merchants of Venice needed large sums of money. To raise the money necessary for these ventures, groups of Venetian merchants joined to form banking companies. A single merchant who did not have money enough to equip his ship was then able to borrow from the banking company. Thus, as Venice grew into a great trading center, she also became a center for banks and wealth. By the 1600's there was a great bank of Venice which lent money not only to merchants of Venice but to merchants of other European cities as well.

In this way the bankers of Venice gradually became powerful. People were using money more and more and banks were becoming increasingly important. The people who had money gained the power which the lords had held when people lived in the closed-in manors. During this period when trade was expanding and people were beginning to travel around, it was the great bankers, like the Medici family of Florence, who became famous and powerful. Business men were gaining the power which had been in the hands of the noblemen.

4. The towns of Germany

During this same time a number of German towns were also becoming rich and powerful because of the growth of crafts and trade. In the south were the towns along the highways which went to Italy, to France, and the Atlantic coast. Naturally traders stopped here to buy and sell goods. Such towns eventually grew into large trading centers, like Nürnberg and Augsburg. In Nürnberg many well-to-do men were engaged in the cloth-making industry, and the other crafts were growing correspondingly. Even as early as 1600 Augsburg was regarded as one of the most important towns of Germany. It had one street which was spoken of as the most splendid street of all Europe. The roofs of the houses were of copper, and most of the houses themselves were built of stone. Travelers of the time remind us that "the show of burnished pewter and brass was the pride of every inhabitant of standing, who let his huge hall door lie open all day to exhibit it."

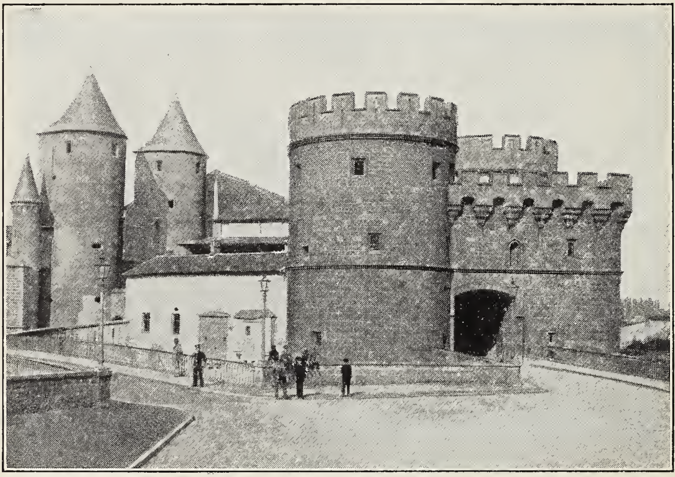

Fig. 13. Metz, in France, is a good example of a medieval town. Only through such gates as that shown on the right could one enter a town. To these fortress towns the people of the countryside were often obliged to flee for protection during wars

There were other important cities in the north on the Baltic Sea and the North Sea, such cities as Hamburg, Bremen, and Lübeck. These German towns, like the English and the French towns, or the Italian and the Spanish towns, were surrounded by great stone walls, above which rose at many points round or square massive towers. The medieval towns were indeed nothing less than fortresses. Each could be entered only through great gateways, which were always closed at night.

IN THE LATER MIDDLE AGES EUROPE BEGAN TO CHANGE AS CRUSADERS, TRAVELERS, AND TRADERS DISCOVERED THE FINER CIVILIZATIONS OF ASIA

At the very moment when the people of Europe were living apart from the rest of the world in their little villages and towns, in many parts of Asia there were homes of wealth. In "Cathay," as the Far East of those days later became known to the Europeans, there were rich agricultural lands, large trading cities, markets, schools, and beautiful buildings. Even in Mesopotamia, Persia, and Turkey trade and crafts were thriving.

Perhaps you hear today that China and India and Persia are "backward" countries. If so you should remember that after 1100 your European ancestors learned much from these countries of Asia. Indeed, the more cultured people of Asia rather scorned the "barbarians" of Europe during the later Middle Ages. Those few Asiatics who knew anything of the "barbarians" despised them for their lack of orderly government and their continual wars, for their drunkenness, for their backwardness in architecture, in painting, weaving, etc. — even for their uncleanliness. The story is told of one Englishman who fell overboard from a ship in an Eastern harbor. "Now God has washed you," said one of the Asiatics observing the incident.

After 1100 two things brought knowledge of the civilizations of Asia to the shut-in people of western Europe: first, the Crusades; second, the accounts of European travelers into Asia.

1. The Crusades (1096–1291) opened the eyes of western Europeans to the civilizations of Asia

Between Asia and Europe is a region known as Asia Minor. It stretches from the Black Sea to the Mediterranean. South of this are Syria and Palestine, the birthplace of Jesus Christ. This region, sometimes referred to as the Near East, had been the eastern center of the Christian Church for hundreds of years.

After 1050 the Turks, an Asiatic race, who belonged to the Mohammedan Church, captured Jerusalem and drove the Christians out. The Christians wanted to regain Palestine, and for two centuries, between 1096 and 1291, the leaders of the Catholic Church and the kings and nobles of Europe urged their people to recapture it.

Seven expeditions to Palestine were organized. These expeditions were called Crusades. During the First Crusade large armed bands of knights and peasants were sent to Palestine (1096–1099). From that time until 1291 Jerusalem was held first by Christians and then by Mohammedan Turks. Most of the time for nearly 200 years groups of western European nobles, traders, craftsmen, and peasants were living in the Holy Land.

This had a very important effect on the people in England, France, and other parts of western Europe. Constantly more and more knowledge of the civilizations of the Near East and the Far East (Cathay) was given to them. Trade grew rapidly between the cities of western Europe and Asia.

The Holy Land was located in the very best trading region in the world. It was between Persia, India, and China on the east and Egypt, Constantinople, Venice, France, Germany, and England on the west. *It was the trading crossroads* of the world of the later Middle Ages.

2. European monks and traders visited Asia and brought back knowledge of its civilizations

The second thing that widened the boundaries of the Europeans' known world was the visits of European monks and traders to Persia, India, China, and other parts of the Far East.

Even though some Christian Europeans had been living in Jerusalem after 1100, the rest of Asia was still a land of mystery. All that Europeans knew of it was through the tales told by occasional traders from India and China. Then suddenly knowledge of these countries began to come to the rulers and business men of European cities, for between 1160 and 1330 a Jewish priest, several Christian monks, and many traders traveled the weary routes of Asia. Some stayed in Asia and died there; a few returned to tell of their experiences and write accounts of what they had seen.

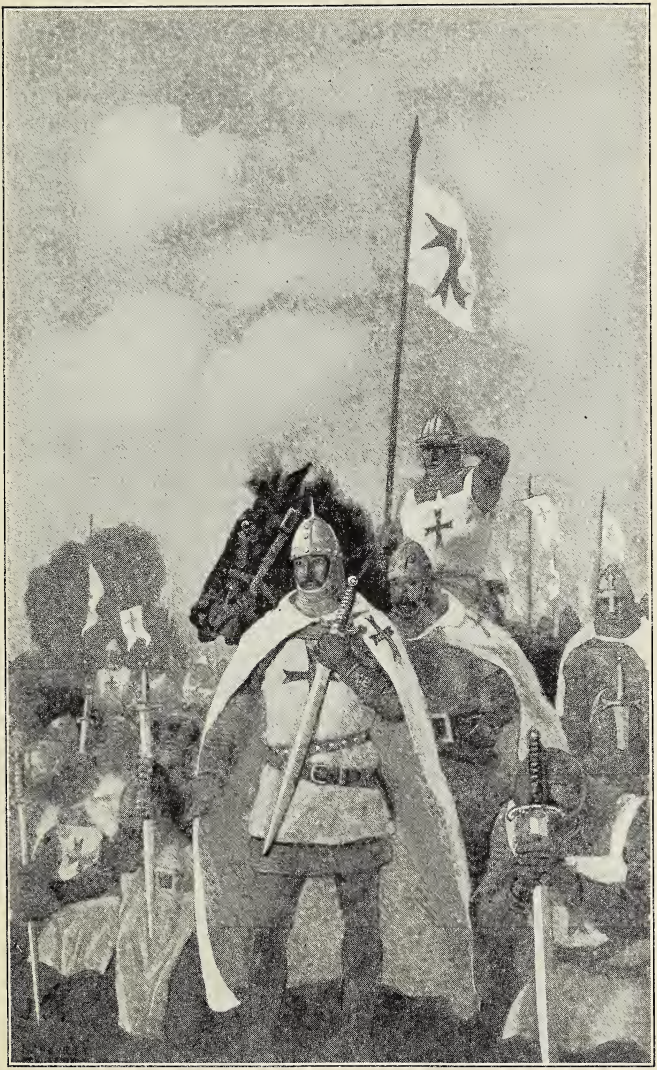

FIG. 14. The Crusaders outside the city of Jerusalem. (From a painting by N. C. Wyeth)

Their stories spread from mouth to mouth and excited in others the desire to go. Gradually more and more Europeans traveled and traded in Asia. The boundaries of Europe's world were widening.

The names of the first and most important of the monks and traders who dared the dangers of the road to far-off Cathay have been preserved. The first was a Jewish rabbi, Benjamin of Tudela, whose travels in Asia extended from 1160 to 1173. The second was Friar John of Pian del Carpine (1245–1247). The third was Friar William of Rubruck (1253–1255). The fourth was a young Venetian merchant, Marco Polo, who went to Asia with his father, Nicolo Polo, and his uncle, Maffeo Polo. The three Polos started in 1271, arrived at the court of the Great Khan (ruler) Kublai of Cathay in 1275, stayed in Cathay for twenty years and did not return to Venice until 1295. The fifth was Friar Odoric (1318–1330).[1]

These voyagers traversed thousands of miles on sea and on land under the worst imaginable conditions. They were surrounded by enemies. They had to walk much of their way. They often lacked food and clothing. They had most amazing experiences, and they saw a new world — a world of wealth and culture much superior to their own. Fortunately for their European fellow men and fortunately for us, they wrote down (or dictated to others) full accounts of what they had seen.

Marco Polo's story is the most complete; so from it we shall quote a few paragraphs. The whole journal, and those of the other travelers too, should be read really to understand the remarkable civilization that had already grown up in the Far East while Europe was still living in manors and little villages.

In the Mesopotamian valley (Asia Minor) the three Polos found trade and industry

Marco writes:

> Bordering upon Armenia, to the southwest, are the districts of Mosul and Maredin. . . . To the north lies Zorzania, near the confines of

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[1] Excellent editions of the journals of these travelers are found in three recent books. We have depended upon them for our interpretation. Manuel Komroff, *The Travels of Marco Polo* and (by same author) *Contemporaries of Marco Polo* (Boni & Liveright, New York, 1928); Merriam Sherwood and Elmer Mantz, *The Road to Cathay* (The Macmillan Company, New York, 1928).

which there is a *fountain of oil* [!] which discharges so great a quantity as to furnish loading for many camels. The use made of it is not for the purpose of food but as an unguent for the cure of . . . distempers in men and cattle as well as other complaints; and *it is good for burning*. In the neighboring country no other is used in their lamps, and the people come from distant parts to procure it.[1]

Of the city of Mosul he says:

> Mosul [in Mesopotamia] is a large province. . . . All those cloths of gold and of silk which we call muslins are of the manufacture of Mosul, and all the great merchants termed Mossuline, who convey spices and drugs from one country to another, are from this province. . . . There are places named Mus and Maredin, where cotton is produced in great abundance. . . . The inhabitants are also manufacturers and traders.[2]

Of Bagdad Marco Polo says:

> [It] is a large city. . . . A great river flows through the midst of it, by means of which the merchants transport their goods to and from the sea of India. . . . There is a manufacture of silks wrought with gold, and also of damask, as well as of velvets ornamented with the figures of birds and beasts. Almost all the pearls brought to Europe from India have undergone the process of boring at this place. The Mohametan law is here regularly studied, as are also magic, physics, astronomy, geomancy, and physiognomy. It is the noblest and most extensive city to be found in this part of the world.[3]

Marco Polo found that China was a land of cities, manufacture, trade, and agriculture

> Departing for Ka-chan-fee and proceeding eight days' journey in a westerly direction, you constantly meet with cities and commercial towns, and pass many gardens and cultivated grounds, with abundance of the mulberry or tree that contributes to the production of silk. . . . It is a country of great commerce, and eminent for its manufactures. Raw silk is produced in large quantities, and tissues of gold and every other kind of silk are woven there. . . . All species of provisions are in abundance, and to be procured at a moderate price.[4]

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[1] Thomas Wright, Esq. (Editor), *The Travels of Marco Polo, the Venetian*, pp. 31–32. Henry G. Bohn, London, 1854.

[2] Ibid. pp. 37–38.

[3] Ibid. pp. 39–40.

[4] Ibid. pp. 248–249.

Of the noble and magnificent city of Kin-Sai, the capital of southern China, Marco Polo wrote:

> At the end of three days you reach the noble and magnificent city of Kin-Sai, a name that signifies "the celestial city," . . . from its grandeur and beauty, as well as from its abundant delights, which might lead an inhabitant to imagine himself in paradise. . . . According to common estimation, this city is an hundred miles in circuit. Its streets and canals are extensive and there are squares, or market-places, which . . . are exceedingly spacious. It is situated between a lake of fresh and very clear water on the one side and a river of great magnitude on the other, the waters of which, by a number of canals, large and small, are made to run through every quarter of the city. . . .
>
> On each side of the principal street . . . there are houses and mansions of great size with their gardens, and near to these, the dwellings of the artisans, who work in shops, and at all hours you see multitudes of people passing and repassing. . . . On every market day, the squares are crowded with tradespeople, who cover the whole space with the articles brought by carts and boats, for all of which they find a sale.[1]

Trade between Europe and Asia increased and with it Europe's Knowledge of the World

It was due to such happenings as the Crusades and the visits of monks and traders to Asia that the boundaries of the known world of the Europeans steadily widened. The little, closed-in manors and towns began to hear more and more about a great world in distant parts of the earth.

Steadily through the Middle Ages trade was increasing. The towns and cities of Europe grew rapidly, manufacturing increased, and Europe began to look just a little as it does today.

By land and by sea, then, trade increased within Europe and between Europe and Asia. From the East, and particularly from India and China, Europeans obtained articles of beauty and luxury — spices, incense, perfumes, precious stones, carpets, and rich cloths. To western Asia Europeans shipped grain, oil, honey, lead, iron, steel, tin, sulphur, cloth, leather, wool, soap, furs, and slaves.

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[1] Thomas Wright, Esq. (Editor), *The Travels of Marco Polo, the Venetian*, pp. 314-321. Henry G. Bohn, London, 1854.

As the years went by trade became more general and more varied. Merchants made great profits and constantly sought to extend their trade. They sent ships out over the unknown seas to find new markets for their goods. It was the effort to find new trade routes that led to the voyages of Columbus and the other explorers about 1500 and to the discovery of the "new" world of America.

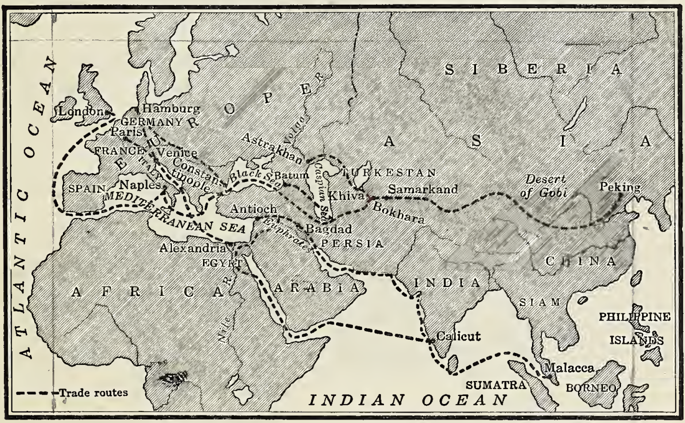
ATLANTIC OCEAN
EUROPE
ASIA
SIBERIA
London
Hamburg
GERMANY R.
Paris
FRANCE
Venice
ITALY
Constantinople
SPAIN
Naples
MEDITERRANEAN SEA
Black Sea
Batum
Astrakhan
Volga
Caspian Sea
TURKESTAN
Khiva
Samarkand
Bokhara
Desert of Gobi
Peking
Antioch
Euphrates
Bagdad
PERSIA
Alexandria
EGYPT
AFRICA
Nile
ARABIA
INDIA
CHINA
SIAM
PHILIPPINE ISLANDS
Calicut
Malacca
SUMATRA
BORNEO
INDIAN OCEAN
Trade routes

FIG. 15. The principal trade routes of the medieval world

TRAVEL AND TRADE WERE VERY DIFFICULT AND DANGEROUS

Although trade was increasing, the difficulties and dangers of carrying goods from one place to another were so great as to be almost unbelievable to us today. For example, roads were very bad, and at times it was nearly impossible to travel on them.

Usually merchants and other travelers went on horseback or in coaches. The roads took them through forests and over mountains. Only occasionally in the midst of the forests were there cities or villages and these were separated by great distances.

"Many villages consisted of not more than three or four houses; and even near Paris, of six or seven or eight; in Spain one might journey eight leagues [about 25 miles] without seeing a house at all. Whereas, therefore, the difficulty, and the pleasure, of a modern tour consists in escaping from people, the difficulty, and the safety, of all tourists in 1600 lay in reaching them."[1]

And always there was the danger of robbers. Sometimes these were just ordinary robbers, and sometimes they were nobles who made a living by holding up the people who traveled through their territory. This custom was common both in Europe and in Asia.

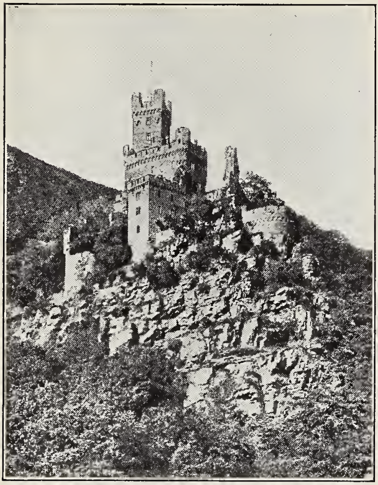

FIG. 16. Many medieval castles were built high up on the sides of hills. This made attack from below very difficult, and the nobles and their men were safe within the walls

On the chief roads there were, of course, inns for the wayfarers. Sometimes these were well kept; often they were very uncomfortable and dirty; yet always the travelers who had come a long distance on horseback were grateful for them.

SO BY THE 1400'S AND 1500'S FAR PARTS OF THE WORLD WERE DRAWING CLOSER TOGETHER

We have seen that the world of most men and women in Europe during the Middle Ages was limited by the boundaries of the manor. There they lived in little communities, almost independent of the rest of the world. They raised their own grain and stock; they ground their own flour; they spun their own thread and wove their own cloth; they made their own shoes. They produced most of the things that they needed.

Then, after about 1100, some parts of the world began to change slowly. People wanted to buy and sell more things; hence more things were manufactured. Towns became trading centers,—places where people went to buy and sell,—and they grew as more and more people were attracted to them. The narrow world of the Middle Ages was breaking down. The distant parts of the world were drawing closer together, coming to depend upon each other more and more.

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[1] Ruy Gonzalez de Clavijo, *Life and Acts of the Great Tamerlane*, pp. 101–102. Translated and edited by Clements R. Markham; printed for the Hakluyt Society, London, 1859.

As goods began to pass from East to West and from West to East a new view of the world developed. The merchants and travelers who went to Asia were largely responsible for the changes which were coming about in Europe — for the increased trade, for the growth of the towns, and for the enlarged view of the world.

Compared with our days, life was simple. The method of making things by hand, the difficulties of trade and travel, the scattered population — all these were very different from the conditions that we know in a modern industrial country.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

Bridges, T. C. The Young Folk's Book of Discovery. Little, Brown & Company, Boston, 1926. An interesting book, easy to read. See Chapter III (The Great Awakening); and Chapter V (The Beginning of Clocks and Watches).

Chatterton, E. Keble. Ships and Ways of Other Days. J. B. Lippincott Company, Philadelphia, 1924. For rapid readers. See especially Chapter VII (Seamanship and Navigation in the Middle Ages).

*Davis, William Stearns. Life on a Mediæval Barony. Harper & Brothers, New York, 1923. An excellent book, describing the work, dress, amusements, religion, customs, and trade of people in a typical community of the thirteenth century.

*Gibson, Charles R. Heroes of the Scientific World. J. B. Lippincott Company, Philadelphia, 1921. A dramatic history of scientific leaders from Protagoras to Faraday. Every pupil will want to read this book.

Hartley, Dorothy, and Elliott, Margaret M. The Life and Work of the People of England. G. P. Putnam's Sons, New York,1929. Vol. I (The Fourteenth Century); Vol. II (The Seventeenth Century). These volumes present illustrated accounts of home life, religion, law, agriculture, trade, and travel in England.

Holland, Rupert S. Historic Inventions. George W. Jacobs & Company, Philadelphia, 1911. Good accounts of two important discoveries: Chapter I (Gutenberg and the Printing Press); Chapter III (Galileo and the Telescope).

*Komroff, Manuel (Editor). Contemporaries of Marco Polo. Boni & Liveright, New York, 1928. An excellent book, describing travel and trade with Asia.

Lanier, Sidney (Editor). The Boy's Froissart. Charles Scribner's Sons, New York, 1917. "Adventure, battle, and customs in England, France and Spain."

*Quennell, Marjorie, and Quennell, C. H. B. A History of Everyday Things in England. Charles Scribner's Sons, New York, 1926. Well illustrated; fine descriptions of life in England from the thirteenth to the nineteenth century.

Selfridge, H. Gordon. The Romance of Commerce. Bridgman Publishers, Pelham, New York, 1928. A good book for rapid readers. Chapters II–VII describe trading during the Middle Ages.

*Sherwood, Merriam, and Mantz, Elmer. The Road to Cathay. The Macmillan Company, New York, 1928. An unusually good book, containing selected tales of early European travelers to the East.

*Synge, M. B. A Book of Discovery. G. P. Putnam's Sons, New York, 1925, Chapters VI–XXVII present interesting episodes of the way in which daring Europeans extended by exploration the boundaries of the known world.

*Van Loon, Hendrik W. Man, the Miracle Maker. Horace Liveright, Inc., New York, 1928. This book tells of many inventions which expanded the "narrow world of the Middle Ages."

Van Loon, Hendrik W. The Story of Mankind, pp. 174–240. Boni & Liveright, New York, 1921. A good description of medieval cities, government, the renaissance of learning, and the great discoveries.

Magazine Articles

"Geography and Some Explorers," *National Geographic Magazine*, March, 1924, pp. 239–274.

*"The Columbus of the Pacific," *National Geographic Magazine*, January, 1927, pp. 85–132.

*"The Desert Road to Turkestan," *National Geographic Magazine*, June, 1929, pp. 661–702.

*"The Pathfinder of the East," *National Geographic Magazine*, November, 1927, pp. 503–550.

*"The World's Greatest Overland Explorer," *National Geographic Magazine*, November, 1928, pp. 505–568.

UNIT III

HOW ENGLAND BECAME MODERN INDUSTRIAL GREAT BRITAIN

HOW ENGLAND BECAME MODERN INDUSTRIAL GREAT BRITAIN, THE CENTER OF WORLD TRADE AND OF A GREAT EMPIRE

Throughout this book we shall be studying one main idea — changing civilizations in the modern world. *We shall learn how the ways of living changed in different countries during the Industrial Revolution. Since 1800 every country in the world has changed. Some have changed very rapidly and completely, others more slowly: but every country has changed in one or more ways. As a result, half of the people of the earth live today in a new civilization.*

Four countries — Great Britain, France, Germany, and the United States — played the most important part in developing our new civilization. Of these four countries Great Britain — or England, as she is frequently called — was the leader.

Our next task, therefore, is to study the transformation of England from a little medieval country of manors to a great industrial empire. That will be the work of Chapters III, IV, V, and VI. In Chapter III we shall learn how the Industrial Revolution changed the England of crafts and farming villages into the Great Britain of manufacturing cities and towns. In Chapter IV we shall see England changing in another respect: we shall see her building up a great fleet of merchant ships, increasing her trade with distant parts of the world, and coming to depend on the outside world for food and other necessities.

In Chapters V and VI we shall learn another result of the changing civilization — the building of an empire by an industrial country. Since 1600 England and other countries have spread European civilization around the world. That is, European people have emigrated to each of the other continents and built farms, towns, and cities much like those in Europe. In Chapters V and VI we shall have our first glimpse of how this was done by Great Britain. In Chapters VIII, X, and XXII we shall learn how it was done by France, by Germany, and by Spain and Portugal. First, however, we must make a careful study of the change that took place in England.

CHAPTER III

HOW ENGLAND CHANGED FROM THE ENGLAND OF MANORS TO MODERN INDUSTRIAL GREAT BRITAIN

Today Great Britain[1] (or England, as she is frequently called) is a country of engines and machines, of railways and motor cars, of telegraphs, telephones, and radios. Today Great Britain controls the greatest fleet of merchantmen and the largest navy in the world. She is the center of world trade and one of the most powerful empires of the earth.

Today four out of every five of Great Britain's people live in cities and towns. Four out of every five work there — in factories, stores, offices, schools, or hospitals, on trains, motor busses, boats, in subways, etc. Only one out of every ten is a farmer.

Today the people of Great Britain travel freely within their own country. Thousands, having traveled either for business or pleasure to other continents of the globe, know how the people of other civilizations live.

What a contrast to the England of the Middle Ages! Then, you remember, almost everyone lived in the country — either as a serf, a freeholder, or a great landowner. In those days a trip even to a small town close by was a great event for most of the people. Every villein and cotter grew his own food and that of his lord, made his own clothing of wool from his own sheep, and kept his own house. There were a few craftsmen in the towns who worked for wages, but only a few. The villages were tiny, the towns were small, and cities were few and far between.

Several things brought about this startling change in England, but of course they did not happen all at once. England changed slowly, and it was not until 1800 that the transformation began to come swiftly.

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[1] Great Britain, or, to give the full title, The United Kingdom of Great Britain and Northern Ireland, comprises England, Scotland, Wales, and Northern Ireland. The British Isles includes these and the Irish Free State as well.

I. The "Black Death" started England on the Way to Change

One important event did take place with great suddenness — the tragedy of the Black Death.

In 1348 and 1349 a terrible pestilence — the bubonic plague, known as the Black Death — swept over Europe. It started in Asia and was brought westward into Europe. From eastern Europe it spread like wildfire. By April, 1348, it had reached the northern cities of Italy. Four months later it was sweeping over Germany and France. It leaped the English Channel and, in the year 1349, spread over all England.

It was the worst epidemic known to the Western world. So deadly was it that persons died two days after contracting it. Remedies were unknown, and the European peoples died by hundreds of thousands. Since accurate statistics were not kept in those days we do not know surely how many died, but records made at that time state that in one district in France 90 per cent of the inhabitants died, and in another, 95 per cent.

Within a year half the population of England perished. Whole families of laborers on manors were wiped out. Landowners had a hard time to find people to farm their land, and many lords had almost no tenants left on their estates.

II. During Several Hundred Years the Landowners slowly took the "Common Land" away from the Peasants

To understand the second change that came about in the lives of the people we must remember the part played by the common land.

Glance again at the map of the manor, figure 8. You remember that throughout the earlier Middle Ages the pasture and the waste land and woodland were used both by the serfs of the manor and the lord as grazing land for their live stock. Because everyone had the use of these plots of ground, they were usually called commons, that is, they were used in common. The serfs depended on the commons to keep their cows, for milk and butter. They also needed the waste land and woodland for wood and turf to cook their food and smoke their bacon.

After the pestilence an important change gradually came about in the agriculture of the country and correspondingly in the lives of the people. With fewer peasants to farm the land, the English landowners turned to sheep-raising, using more and more of their land for pasture, and less for the raising of crops. Great Britain had always been noted for fine sheep, and sheep-raising brought in large profits through the sale of wool and mutton. Moreover, sheep required little care, since one shepherd could be hired for a small wage to tend a great flock. So sheep-raising became more general throughout Great Britain. One man who has described the change wrote: "Where there have been many householders and inhabitants, there is now but a shepherd and his dog."

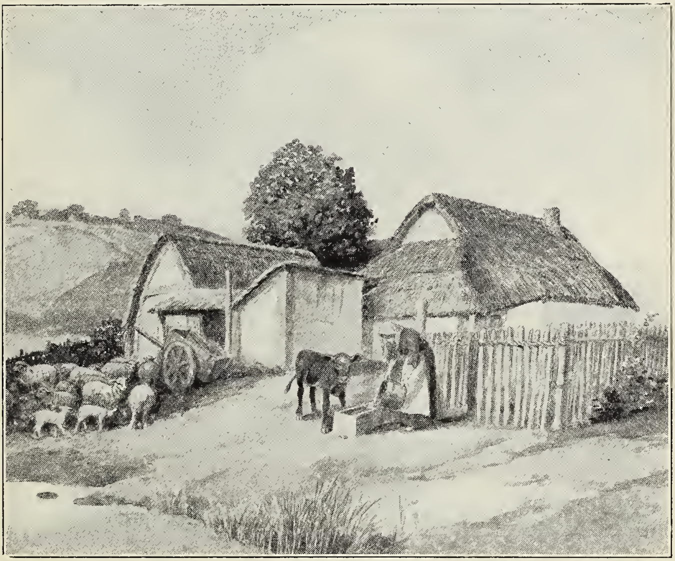

FIG. 17. After the Black Death swept over England, on thousands of small farms like this many sheep and other domestic animals were raised. Sheep-raising was profitable, and one person could take care of many sheep

However, to raise sheep in large numbers the landowners needed more land. So they began to fence in the common land of the manor, shutting out the peasants' cattle, and cutting off

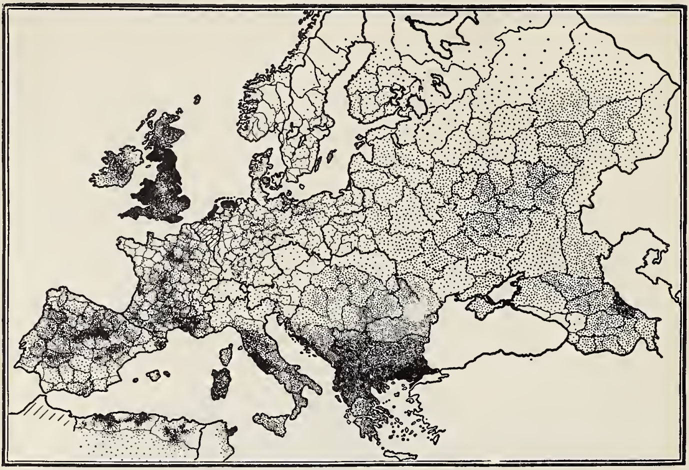

Fig. 18. The distribution of sheep in Europe today. A map such as this made in the 1400's would have shown that even then Great Britain raised more sheep per square mile than any other country in Europe

their supplies of turf and wood. This system of fencing off the commons and forbidding the peasants to trespass was called land inclosure. It was being done even in the 1200's and went on slowly for 600 years.

The desire to raise sheep was not the only reason for the inclosure, however. The city and town populations were growing. Not only more wool was needed but more food too. Because the peasants were producing only a fraction of what the land was able to yield, progressive landowners thought that by taking the commons they could farm more profitably. They could employ fewer men who would be willing to work hard and to try new ways. This plan seemed successful; for gradually farming did improve, and more food was produced on the manors than had been raised in the earlier days.

How the Land Inclosures affected the Peasants

But when the peasants could no longer use the commons for their own farming they suffered much hardship, and became poorer than ever. They sold their cows and their hogs one by one.

Many of them finally had only their small gardens, where they could still grow a few vegetables and perhaps could raise a pig and a few chickens. Others eked out a living by working for the landowners for wages.

More and more, as life changed, the peasants turned to crafts in order to earn money to pay for food, clothing, and tools. They were becoming wage-earners, dependent upon others for their employment. They received weekly payments and divided these among the shopkeepers for bread, flour, butter, and clothing, even as we do today.

So during the 1500's and 1600's manor life was changing. More people began to work for wages, both on the farms of the landowners and in the growing crafts. Old wives of the villages, who once had been a little more prosperous than their neighbors, loved to tell the children about "the good old days" before the landlords inclosed the commons. They forgot that some of their neighbors had then lived in misery. They told how jolly life had been, when a man who owned a fat pig or a cow, some fine Spanish iron, a bit of silk, or a homespun suit felt as important as the king himself. Then there had been no drudging away at one dull task. In those days, they would say, time had sped, for every day brought new and varied tasks to be done — planting in the moist earth, tending the newborn calves and colts and tiny downy chicks, and making war on the weeds until the crops ripened. There was haying time, the cutting and drying of the grain, and the gathering of grapes and apples. In the winter there was a little spinning and weaving to be done, even metal-working, or wood-carving. There was more time to decorate the house, keep the fences trim, and clip the hedges neatly.

This is what the old people used to tell the younger ones as the village life changed and the cottagers moved away into the towns hunting work. They could do this in the beginning, because the Black Death had upset the old customs. The scarcer the serfs were, the more independent they could be toward their masters. Sometimes it happened that every living soul moved away from a village and left it deserted.

Cloth-making and Other Handicrafts were flourishing in English Homes in the 1700's

By 1700 many of the cottagers had become excellent craftsmen. Cloth-making had become the chief household craft in Great Britain. There were few factories and most of the spinning and weaving was done in the houses of the cottagers. Travelers who wrote of their tours through Great Britain in the 1700's spoke of the fact that many English cottages were like little beehives, humming with industry. Daniel Defoe, whom you doubtless know as the author of *Robinson Crusoe,* toured the British Isles in 1724–1726. Here is what he wrote:

> At every considerable house there was a manufactory . . . . Every clothier must necessarily . . . keep one horse at least, . . . to carry . . . his manufactures to the market; so every one generally keeps a cow or two, for his family. By this means the small pieces of enclosed land about each house are occupied. . . . As for corn they scarce sow enough to feed their poultry. We saw the houses full of lusty fellows, some at the dye vat, some at their looms, others dressing the cloth; the women and children carding or spinning, all employed, from the youngest to the oldest.[1]

Perhaps you are wondering how these people who worked independently in their homes were able to find a market for their goods. About this time a new kind of trader was seen in the small English villages — a trader who was not interested in *many* kinds of goods but only in *one.* These merchants traded in cloth only. They made their way in any weather to the doors of the weavers' cottages, where they bought the cloth, packed it on their horses, and sent it by pack-horse trains to London or to other cities. From these in turn it was shipped to foreign countries.

Even as early as the 1700's Great Britain was building up a world trade in cloth.

Before long this gathering of manufactured goods had become a thriving business. Some traders bought not only cloth, but also raw wool, which they turned over to workmen to make into cloth. To one group of cottagers they gave wool to be carded (combed) and spun into yarn. Later they collected the yarn and

[1] Daniel Defoe, *A Tour through the Whole Island of Great Britain.*

gave it to weavers to make into cloth. To each of the workers they paid wages.

In this way these clothiers, or traders in cloth, gradually became "capitalists." They accumulated money, bought raw materials, hired workmen to spin and weave, and sold the finished product. Do you see some similarity between this system, which had grown up by 1750, and our modern system of producing things? What is the principal difference?

Of course there were many other crafts besides those of spinning and weaving woolens. Long before 1700 English clothiers were bringing raw silk from China and raw cotton from India and Egypt. Craftsmen wove these products into silk and cotton goods. Furthermore, in Scotland and Ireland, much fine linen was woven out of flax.

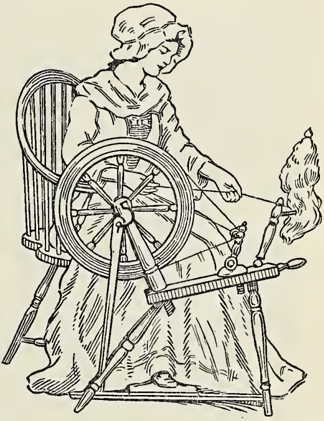

FIG. 19. By 1700 the whir of the spinning wheel was to be heard in many English homes. The women of the house usually did the spinning while the men usually did the weaving. (See also figure 21)

In the towns and cities crafts other than those dealing with textiles were growing. There was pottery-making, for example. You have doubtless heard your mother speak of Wedgwood pottery, which housewives cherish even today. In the 1700's Josiah Wedgwood, a pottery-maker and prominent citizen of the time, had just begun to make a new cream-colored ware, which became very popular. He engaged more and more skilled workmen to manufacture his goods. His pottery became known the world over, especially the colored pottery, often blue, with white figures in relief. Today, as in the 1700's and the 1800's, the Wedgwood mark on a vase means quality and beauty.

At the same time highly skilled English cabinetmakers were creating new types of beautiful furniture, which have never been surpassed. Perhaps you have heard of Chippendale secretaries, Sheraton sideboards, or Heppelwhite tables. These were first made in the days we are discussing. The work of these cabinetmakers of the 1700's still serves as models for present-day styles of furniture.

At Sheffield knives and various kinds of hardware were being made in shops run by water power. We know a little about these fine cutlery shops from a visitor, who said of them: "Many grindstones are turned by a set of wheels which all receive their motion from one water wheel, increasing in speed from the first movement to the last; in the finishing wheels the turning is so rapid that the eye cannot perceive the least motion."

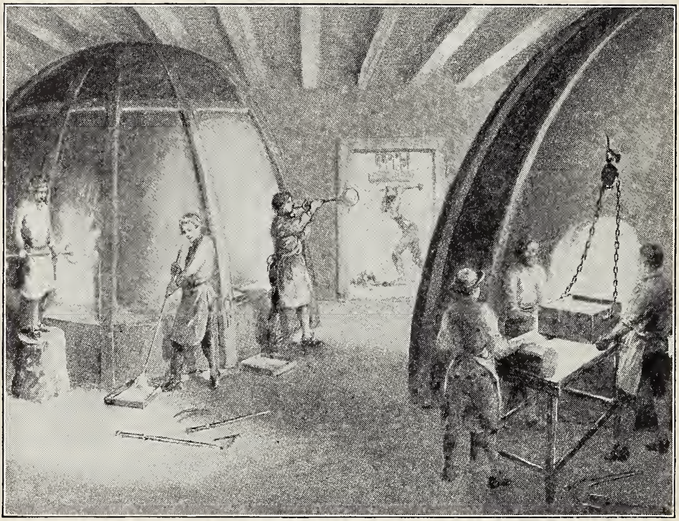

FIG. 20. Here we see an early English factory. At the right, the ingredients for making glass have been melted. On the left, a craftsman is shown blowing the liquid glass into shape

In some towns printing and bookbinding and the making of handmade paper were prosperous trades. If you have ever noticed the paper in old, old books you will have realized how much more durable it is than our modern paper. Other trades also began to flourish; for example, the making of buttons, glassware, soap, tools, and fine jewelry.

Everything was handmade. Only a few products were made, and quality rather than quantity was treasured by the craftsmen.

AS PEOPLE TURNED TO HANDICRAFTS (1500–1700) TOWNS GREW RAPIDLY

The old manor and village life of England was certainly changing. England was becoming more and more a country of towns and cities. Some villages where particular crafts had developed grew into busy manufacturing towns. As the years passed the towns became larger and larger cities. London is a good example. About 1500 it contained only 50,000 people. Before 1700 its population reached a half-million. Manchester, Liverpool, Birmingham, Leeds, and other towns also grew into small but busy cities during this period.

GROWTH OF THE POPULATION OF LONDON

In 1509	50,000
In 1532	62,000
In 1593	152,000
In 1605	224,000
In 1661	460,000
In 1696	500,000

English youth living in the country and hearing of the pleasant life of the towns and cities was attracted to them then just as youth is today.

A prominent traveler of the 1700's told of the flocking into the cities. In many respects his account would describe happenings today in the United States or in other industrial countries.

> Young men and women in the country villages fix their eye on London, as the last stage of their hope; they entered into service in the country for little else but to raise money enough to go to London, which was no such easy matter, when a stage-coach was four or five days creeping one hundred miles; the fare and the expenses ran high. But now, a country fellow, one hundred miles from London, jumps on to a coach box in the morning, and for 8 to 10 shillings gets to town by night; besides rendering the going up and down so easy, that the numbers who have seen London are increased ten-fold. And the number of young women that fly thither is almost incredible.[1]

Evidently the boys and girls of that time were moved by the same desires as is American youth in the country today. They had heard much about the excitement of town life, of the money to be made, and they were tired of dull country living. So they left their homes in such numbers that moving to the towns was almost an epidemic.

[1] Arthur Young, *Farmer's Letters to the People of England*, Letter IX, p. 340. Edition of 1768.

Before 1800 a goodly percentage of the English people had gone to live in towns. Many of them became prosperous tradesmen and craftsmen. Others hired themselves out at low wages, or wandered hungry through the streets looking for work. Still others signed up with sailing vessels and left for far-off parts of the world.

In the 1400's England had been the "backwoods" of Europe, but now it was becoming a center of commerce and of flourishing handicrafts. The peasants of 1100 were becoming town and city dwellers, wage-earning craftsmen, instead of serfs tied to a lord's land. And as these things happened their knowledge of the world gradually widened.

Then after 1700 began the Industrial Revolution, and England changed more greatly than ever Before

In 1700 in spite of the changes of the two preceding centuries farming, handicraft, shipping, and trade still comprised the work of the English people. There were no machines as we know them today, and no engines to run them. All work was done by hand, and power was provided either by muscles or by crude water wheels and windmills. Transportation of goods was by pack horse and freight wagon or canal boat. Travel was limited. There were no railways, no motor cars, no steamboats, and no airships. Messages could be sent only by human messengers and no more rapidly than slow, horse-drawn transportation would permit.

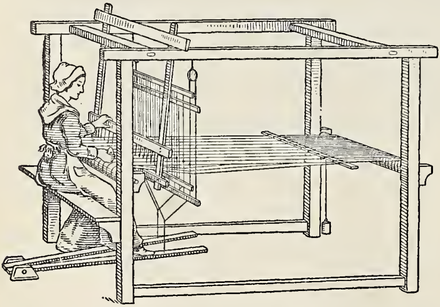

Fig. 21. A hand loom in use before the Industrial Revolution. Hand and foot power alone ran this loom

Thus, although the old England of manors and slavery had largely disappeared and crafts had developed, England was far from being the modern industrial country it is today.

Then almost overnight, it seemed,— so quickly did one change follow another,—the England of handicrafts quickly disappeared, and the Great Britain of mechanical power, of manufacturing, of coal, iron, and steel, of world trade and world empire, took its place. From being a small, almost self-sufficient country of a little over 6,000,000 farmers and craftsmen in 1700, Great Britain became a country of more than 40,000,000 machine-tenders, mechanics, clerks, and business men, controlling a world empire of about 400,000,000 human beings.

The Invention of the First Textile Machines and of the First Engines

You will recall from your study of *An Introduction to American Civilization* how the Industrial Revolution began with the invention of the first textile machines and the first practicable engines. (See Chapters VII and XII of that book.) In brief the story is that of the change from the spinning wheel and hand loom to the spinning jenny, or spinning frame, and the power loom. The chief steps may be quickly reviewed.

First, the improvements in spinning, beginning with Hargreaves's invention of the spinning jenny (1764). By means of these, 30, 80, and finally hundreds of threads could be spun on a single machine instead of one thread as on the old spinning wheel.

Second, the improvements in weaving. These were, first, the invention of the flying shuttle (1733), by which the shuttle was jerked more quickly and accurately back and forth through the loom than it could be thrown through by the weaver. Then came the successive improvements in the machines, each of which made it possible to weave larger and larger amounts of cloth.

Third, the improvement of the steam engine. Until after 1760 machine manufacturing was held back because of the *lack of mechanical power*. The spinning and weaving machines were still run by the hands and feet of the workers. In 1768, you remember, Arkwright invented a way of running spinning jennies by the power of crude water wheels, and in 1785 Cartwright did the same thing for weaving looms. Water power was somewhat better than hand and foot power, of course. More yarn could be spun and more cloth could be woven. So some improvement had been made.

In the meantime, however, men were working to perfect the steam engine. If this engine could be made to work, England could manufacture goods for the entire world, thought far-seeing English business men.

But the engine-inventors had met many disappointments. From your earlier study you know the outline of the long, long

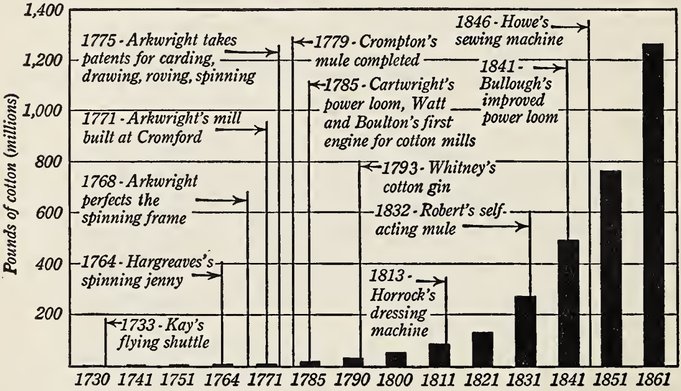

FIG. 22. This combined graph and time line shows clearly that as quicker means of making cotton cloth were invented the textile industry grew. Notice how the bars which show the amount of raw cotton imported into Great Britain grow higher as invention after invention appeared

story of the invention of the steam engine. First, that the tremendous expansive power of steam had been known for hundreds of years; second, that no one discovered how to make really practicable steam engines before 1600; third, that Denis Papin (1679) thought of inclosing the steam in a tube, or cylinder, and of using the expanding force of the steam to push a piston; fourth, that other inventors, especially Thomas Newcomen (1705) improved on the piston idea, and that by 1750 crude engines were being used to pump water from the iron mines and coal mines of England.

But, as you know, in all that time the engines worked poorly and were not used at all to run the new textile machines. Then in 1782 James Watt, the Glasgow instrument-maker, succeeded in greatly improving the Newcomen engine.

At last men had a steam engine that would turn wheels and drive machines. At last spinners and weavers would be relieved of running their machines by their arms and hands and feet. Steam power would do it for them while they tended the machines. At last men had mechanical power with which to propel road vehicles and boats. Now they could use their brains more and their muscles less. They could plan, guide, and decide important things and let the engines do the pulling.

So during the very years that some ingenious Europeans were inventing machines to spin and weave and do other kinds of work, others were inventing engines to drive these machines.

Thus did the Industrial Revolution begin in the 1700's.

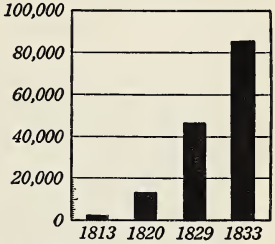

FIG. 23. Increase in the number of looms driven by steam power, 1813–1833. Compare this graph with figure 22

At first the improvements in the new machines and engines came slowly. The capitalist clothiers were slow to see the advantages of the expensive machines and to risk their fortunes on them. Not until well after 1800 were many factories built for the new power-driven spinning and weaving machines. But then, as figure 23 shows, increasing numbers of factory-owners installed engines and looms. By the middle of the century few hand looms were in use. Steam power had come, and coal was king!

FORTUNATELY GREAT BRITAIN HAD GREAT DEPOSITS OF COAL

The new steam engines required coal for fuel. Great Britain had in her coal mines some of the world's richest deposits. Even in Roman times coal had been mined in Great Britain. It was well known there in the Middle Ages, and well-to-do people sometimes burned it in their stoves. An old record that has come down to us from 1056 speaks of the coals of Newcastle. In 1200 many people about Newcastle were using coal, and it was even being shipped by boat to London. Steadily the coal trade grew. In the year

1725 London burned more than 1,000,000 tons. A visitor to the city at that time spoke of seeing one fleet of 500 coal boats coming up the river Thames.

Formerly the heating of houses and the smelting of iron had been done by burning wood and charcoal. Indeed, even as early as 1500, so much timber was being cut down to make charcoal for the iron-smelters that Parliament became alarmed for England's forests. You can imagine the damage to the forests, for to smelt one ton of iron ore required two loads of charcoal, and to make one load of charcoal two loads of wood were cut. So Parliament passed laws limiting the cutting of wood lest the English merchants should lack timber for ships.

The ironmasters in turn began to tremble for their trade, for without wood they thought they could not carry on business.

Robert Dudley, the son of an ironmaster, saved the situation and helped to bring about the wider use of coal. His father's iron foundry was built above a coal field. Young Dudley succeeded in inventing a way of smelting iron ore by using coal instead of charcoal.

But the ungrateful charcoal ironmasters feared that their profits might dwindle. They drove him from his home. He built an iron foundry first in one place and then in another. In each place the charcoal ironmasters opposed him. Finally he succeeded in producing more iron with the use of coal than the other ironmasters could by using charcoal. Nevertheless, riots were organized against him, his machines were destroyed, and at last he was forced to give up his work.

In the 1700's, however, a charcoal famine, due to the scarcity of timber, occurred in some parts of Great Britain and led to the wider use of coal. So scarce was charcoal that to cook a leg of mutton tradesmen's wives were forced to pay threepence to fortunate neighbors who had fires. Now there was nothing for fuel except coal; so the charcoal ironmasters were forced to use it. At last coal became the chief fuel of the new age of engines.

By 1800 the foundation for the new mechanical civilization was laid, and the Industrial Revolution was really started. Practicable machines and engines to run them were coming into use in Great Britain. Great mines of coal were being opened up.

THE INDUSTRIAL REVOLUTION CHANGED THE ENGLAND OF CRAFTS AND VILLAGES INTO THE GREAT BRITAIN OF MANUFACTURING CITIES AND TOWNS

1. Work was no longer done by hand at home but by machine in the factory

The new spinning and weaving machines were large. They were also complicated and expensive. The poor weaver in the south or west of England, who had barely been able to make his living before, did not have the money to buy a costly new power loom and put it up in his house in place of the old simple hand loom.

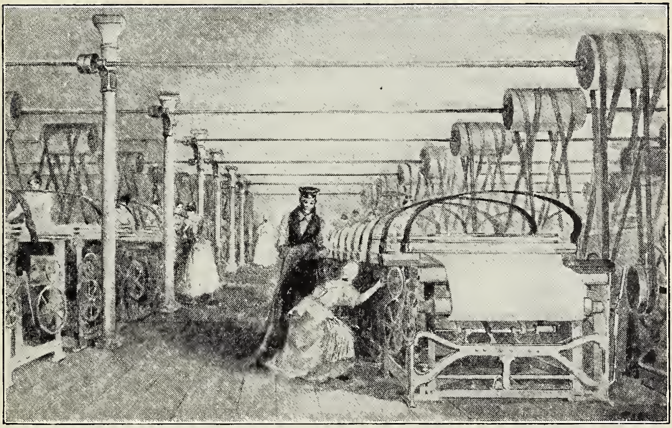

FIG. 24. An early English factory. Steam power ran the looms in this textile mill. The woman at the right is oiling her loom. Her work is to start and stop her machine at the proper time, and to see that it is kept in good running condition. Compare her work with that of the woman shown in figure 21

Who, then, bought the new machines? The men who had made money in one way or another — perhaps in trade, perhaps through owning land or flocks of sheep. Sometimes it was the capitalist clothier. These men thought that if they could make money by owning one machine and hiring someone to run it, they could make more money by buying many machines and hiring many to run them.

This they did. The machines were then set up in buildings, and people were hired to work on them. Thus *factories* grew up.

Factories were not entirely new, however. Even before the Industrial Revolution wealthy men had hired poor people to spin or weave, or smelt iron for them. A poem published about 1600 says that

> "Within one room being large and long
> There stood two hundred looms full strong."

In one "factory" 150 children were picking wool — "the children of the poore silly men"; 100 women were carding; 200 girls were spinning; there were 50 shearers, 80 rovers, 40 dyers, and 20 hands in the fulling mill.

The hand spinners and weavers could not do nearly so much work on their old hand machines as the hired laborers of the factory-owner could do on the new machines. Therefore the craftsmen could not sell the goods they made so cheaply as the factory-owner could sell his. Nor could they make goods of as even a quality as the machine made. So, gradually, people stopped buying the handmade goods and bought the cheaper factory goods.

Then the craftsmen who worked in their homes became poorer than ever. And, of course, they hated the machines, the factory, and the factory-owner. In many places their poverty and distress and hate led them to smash the new machines.

2. The men who formerly had worked for themselves at home now worked in factories for wages

Factory-owners with their machines, factories, and capital were more powerful than the hand workers; so the men who worked in their homes were finally forced to give up the fight. Instead of working for themselves they went to work for someone else. They went into the factories to work long hours at a daily wage.

The loss of their freedom was a great and unwelcome change in their lives. They had to work under the inspection of a foreman, to go to work when he told them to, to stop for lunch only when he permitted them to, to go back at his command, and to work again until he released them. In their homes they had been free to begin work when they wished and to work only so long as they wished. Of course they had worked long hours, but much of their work was for themselves.

Furthermore, factory-owners gave no holidays. Imagine the resentment of laborers who had to work on Easter Monday or on May Day, both of which were important holidays in Great Britain. Life had not been too easy even when they worked at home, but if they worked hard it was to finish a product of their own making or to be paid as soon as possible. Now their own interest in their work mattered little. They must work at a certain speed or lose their jobs.

The cost of living was high, and in order for a family of cottagers to live, many of the women and young children were obliged to work also.

The working hours were cruelly long. The machines started at six o'clock in the morning and did not stop until seven or eight in the evening. Think of it — twelve to fifteen hours of labor each day. People often dropped off to sleep over their machines.

Even children worked the same long hours every day from the time they were five or six years old. They worked in mines as well as in mills and factories. We can hardly believe the accounts of their wretchedness. Some were kept awake and working by a lash. They were dreadfully tired. They were hungry. Many of them were ill from overwork and unhealthful living, and many of them died from it. At first there were no laws forbidding factory-owners to employ them, and their parents needed money too much to prevent it.

By 1819, however, the work done by children in the cotton mills was limited by law. Children under nine were not to be employed. Children under sixteen could not work more than twelve hours a day. One and a half hours were allowed them for luncheon. As bad as this seems to us, it was an improvement over the earlier conditions.

To many workers in the first years of the Industrial Revolution it seemed that only suffering and distress would result from the use of machines. The cities had become crowded with workers who had left their homes in the villages to work in factories. They had only exchanged poverty in the country for poverty in the city. In the country they had had fresh air and sunlight, but in the city they worked under unhealthful conditions, crowded together, and with little air or light.

3. How the Industrial Revolution affected the number of people in Great Britain

There was one unexpected result of the Industrial Revolution. We have seen how poor the workers were, and how they often did not have even enough food. They lived crowded together under unhealthful conditions. Should you expect the population to keep on growing and growing when living was so hard?

Look at the bar graph of figure 25. It shows an astonishing fact. The population had actually increased from 10,500,000 in 1801 to 43,000,000 in 1921. How did this happen?

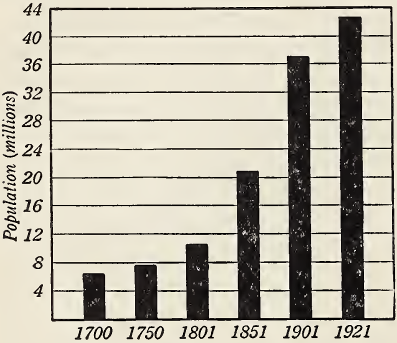

Fig. 25. Growth in the population of Great Britain, 1700–1921

There were several reasons, but two are of greater importance than the others: (1) the increase in scientific knowledge; (2) the improvement in the standard of living of the people.

After the first years of changed living, conditions began to improve. Scientists in Europe and America were finding out more about diseases, the causes of them, and how to cure them. They found that they could prevent some diseases, such as typhoid fever, by improving sanitation in city streets and in houses. They learned how to vaccinate people in order to prevent smallpox. For many, many years hundreds of people had died from this dangerous disease. Now deaths from smallpox could be prevented. Fewer people died from disease in the cities.

Factory conditions were improving, too. The number of working hours was being shortened by law, and fewer children were permitted to work. As trade increased and more and more workers were needed, wages also began to increase. More people came from the country districts to swell the urban population.

People in the country districts benefited, too. There were now fewer mouths to feed as sons and daughters went into the cities. As the country population decreased it was easier for those left behind to find work.

4. Raw materials and manufactured goods were produced on a larger scale than ever before

With machines replacing hand labor everywhere and with a large number of people working long hours every day, the amount of goods produced in mine, mill, and factory increased enormously. In 1813, for example, there were about 2400 power looms in the British Isles, but by 1833 the number had increased to about 85,000 (figure 23). Spinning machines multiplied at the same rate. England's great textile industries — cotton, silk, and wool — were growing rapidly.

Number of Pounds of Cotton and Raw Silk imported into Great Britain

Year	Cotton	Silk
1801 . . .	54,000,000	960,000
1845 . . .	722,000,000	6,300,000

After 1801 the amount of cotton imported increased so rapidly that by 1845 it was nearly fifteen times as large as it had been in 1801. Between 1801 and 1845 the amount of raw silk shipped to Great Britain increased seven times. The amount of wool imported into Great Britain increased ten times in the same period.

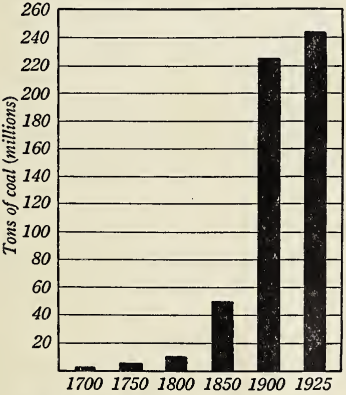

Fig. 26. Production of coal in Great Britain, 1700–1925

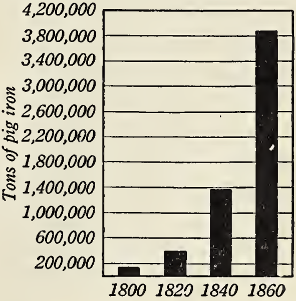

Fig. 27. Production of pig iron in Great Britain, 1800–1860

What about the mining of coal? From 1700 to 1800 the amount of coal mined was small. By 1850, however, machines were in widespread use and most of them were run by steam engines. This increase in the number of engines caused a great increase in the production of coal, so that 49,000,000 tons of coal were mined in 1850. Look at the bar graph of figure 26 and note the production at other times.

The same story of rapid industrial development is told through the graph of pig-iron production, figure 27.

5. After 1800 the population of Great Britain crowded into cities in the industrial regions

The number of people increased enormously after the beginning of the Industrial Revolution. But population changed in another way also. It became massed in cities where work was most abundant. Consequently towns grew into small cities and small cities grew into larger ones.

Manchester is a good example of this change. In 1700 Manchester was a small town. Today it is the center of one of the most remarkable industrial regions on earth. Within 50 miles of the center of the city 9,000,000 people are living. Except in New York City, there is no such congestion of humanity elsewhere in the world. Nowhere else are there so many factories, so many miles of railroad, such throbbing industry, and such huge amounts of engine power.

Liverpool, Birmingham, Leeds, and other cities grew in much the same way as Manchester. (See the following table.) We should not have to try very hard to think what natural resources might be near these large cities. Coal, of course, and iron.

Population of English Cities, 1801–1921

	1801	1841	1921
Manchester (and Salford)	95,000	311,000	964,000
Liverpool	82,000	286,000	803,000
Birmingham	71,000	183,000	919,000
Leeds	53,000	153,000	458,000

During the same time the number of people working on farms has actually grown smaller. Fifty years ago there were more than

2,000,000 people working on the land in Great Britain. Today there are only about 1,500,000, in spite of the fact that in the past 50 years the total population has much more than doubled. Can you imagine how much the English people depend upon other countries for their food?

6. As her industries grew Great Britain built modern means of transportation

In the 1700's the roads were bad, there were few canals, and there were not enough rivers to transport goods. As for railways, they had not been dreamed of because there were no engines.

To be sure there were roads in England long before the Middle Ages. In ancient times the Romans conquered England and while they lived there built excellent roads. But that was 1500 years before the Industrial Revolution. By 1700 these roads had fallen into a woeful state. Nevertheless, the farmers had to carry their produce to market over them, and the trip to town required long and weary travel. In Staffordshire the potteries distributed their products and brought their fuel by means of pack horses. Pack-horse trains were used also by the small merchants of Manchester. The poor roads and the slowness of transportation by animal power made overland travel and trading difficult.

From travelers' descriptions we learn how bad the roads were. One writes:

> The length of way was only 40 miles but 14 hours were consumed in traversing it; while almost every mile was signalized by the overturn of a carriage, or its temporary swamping in the mire. Even the royal chariot would have fared no better than the rest had it not been for the relays of peasants, who poised and kept it erect by strength of arm, and shouldered it forward the last 9 miles, in which tedious operation 6 good hours were consumed.

Another tells an odd incident:

> Going to church at a country village, not far from Lewes, I saw an ancient lady—and a lady of very good quality, I assure you—drawn to church in her coach with six oxen; nor was it done in frolic or humor, but mere necessity, the way being so stiff and deep that no horses could go in it.

Roads and canals were improved

After 1750 roads were somewhat improved, and the use of wagons and carts increased. Wagons had a regular time schedule in which they transported wool and cloth to London. Within a considerable area around London farmers rented their wagons and teams to transport food to the city. They in turn brought back manufactured goods — groceries, coal, wine, and other supplies — for the shop-owners of the country villages.

Toward the end of the 1700's turnpike companies were building fine roads in England. These new roads made traveling very much swifter and easier. Stagecoaches plied regularly between the principal towns, carrying mail, passengers, and provisions. Some of the coaches were very comfortable and handsome. They were well lined inside, and the cushioned seats saved the occupants from being too badly jolted.

The sound of the horn as the coach dashed into a village was the signal for frenzied activity. Travelers hurried to gather their luggage and take their places for the journey. The townspeople eagerly received the packages and messages delivered by the driver. The coach, you see, was the news-carrier. Its coming was the topic of long conversations in the blacksmith's shop. The news it brought gave the people glimpses of the world outside the village.

Do you remember that in studying the United States you learned that few canals and no important ones were built in our country until after 1800? This was not true of Great Britain nor, in fact, of most of Europe. Canals played an important part in the transportation of such heavy materials as coal and iron. As early as 1750 one of the first canal-builders, the duke of Bridgewater, constructed a canal which a writer of the time described as "a magnificient work near Manchester, perhaps the greatest artificial curiosity in the world; crowds of people from all parts resort to it, and persons of high rank express their admiration of it."

This canal was intended to carry coal from the mines to the city. It began about seven miles from Manchester at the foot of a hill where the duke of Bridgewater had built a dam. The duke was a clever man and had worked out a scheme for bringing coal out of the mines in the hill and carrying it without reloading to Manchester. He had canals cut into the hillside. Long flat-bottomed boats went in and out of these tunnels carrying coal.

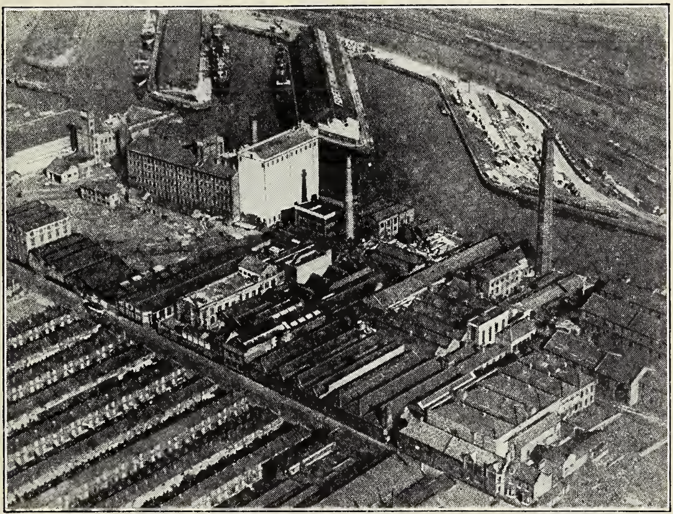

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Fig. 28. A small section of the city of Manchester today. Good transportation and nearness to coal have made it a prosperous manufacturing city

As time went on other canals were built in the industrial district of England. One of these, the Manchester Ship Canal, was of very great importance.

As industry developed, especially between 1870 and 1890, the business men of Manchester saw that their city could not expect to become a great commercial center without direct water communication with the sea. They determined to have a canal through which large ships could pass out to sea, laden with Manchester-manufactured goods. They began to construct such a canal in 1882. Twelve years were required to build it. Finally on a cold January day in 1894 a huge ocean steamer sailed up to the very heart of Manchester.

You can guess what happened after that. Commerce began to increase. Manufacturing and trade grew rapidly. Manchester goods could be shipped to other parts of Great Britain and to faraway regions of the world much more cheaply than formerly.

So it was that a great transportation system of roads and canals grew up in less than 100 years. But even improved roads and many canals did not satisfy Great Britain's needs for rapid transportation.

A faster means of transportation: the steam locomotive

Even in the early 1700's there were short railroads in England. These were mainly in the coal regions. They were not steam railroads. They were little cars running on wooden or stone rails, drawn by horses or even by men and women. In this way coal was hauled from the mine to the town, or to boats on the river or canal. This kind of railroad was used for 100 years, but only with horse or human power.

Then came George Stephenson's invention of the steam locomotive. Before 1825 there was a railway for horse-drawn cars from Stockton to Darlington. This road was about 25 miles long. Stephenson wanted to make a steam engine that would pull the trains of cars. At last he perfected a model locomotive and persuaded the director of the horse-drawn line to install six like it on the line. These little locomotives ran at a speed of from twelve to fourteen miles an hour. They hauled only freight, and but a small amount of that. Horses still dragged the passenger cars and the greater part of the freight cars.

Improvement came rapidly, however. In October, 1829, Stephenson had a new type of engine, called the *Rocket*, which could draw a load of twelve and a half tons at 29 miles an hour.

Of course Stephenson was not the only person who was trying to make an engine that could haul loads. There were many others who were devising new steam engines and attaching these to "wheeled carriages." A test of the many different types of locomotives was made in 1829, when a prize was offered for the best engine. The test consisted of twenty trips along a two-mile level stretch of rail, and all entries were required to make at least ten miles an hour.

There were thousands of curious people in Manchester and Liverpool excited and eager to watch the performance.

Stephenson had his *Rocket* ready at the appointed time. There were only three other ambitious engineers who were ready to compete with him. They had locomotives called the *Novelty*, the *Sanspareil*, and the *Perseverance*. When the signal was given test trips were made by all three. The *Rocket* performed very well.

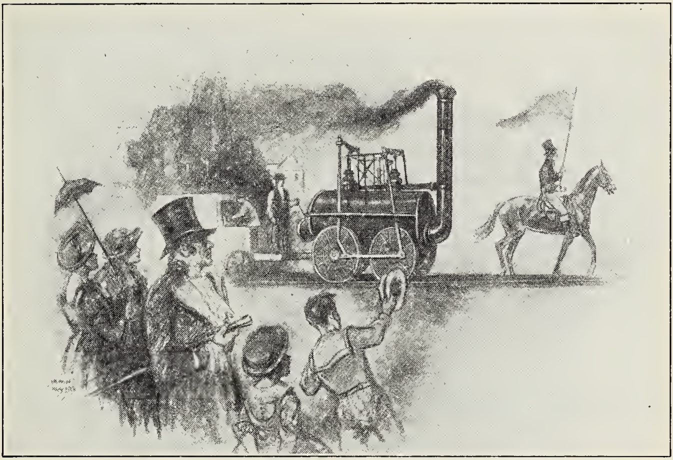

FIG. 29. A scene along the Stockton & Darlington Railway in 1825. The law required that a man on horseback ride in front of the engine to clear the track. This was not difficult, for the greatest speed of these trains was only about twelve or fourteen miles an hour. (Courtesy of the Central Alloy Steel Corporation)

The *Novelty* sometimes attained a speed of 24 miles an hour, but the bellows that fed air to the fire in the engine gave out, and the *Novelty* had to limp out of the race for repairs.

The *Sanspareil* also had difficulties. Its boiler needed mending. The *Perseverance* could not go faster than six miles an hour; so it was out of the running.

The *Rocket* had won, but the contest was not over. It was postponed again and again, so that the other two engines could be put in working order. The *Rocket* was ready every day to do its two-mile stretch. It even treated the people to a spectacle by pulling a coach containing thirty people at the rate of 30 miles an hour. Another time it hauled a load of thirteen tons in wagons at an average speed of 35 miles an hour. At last the judges decided that there was no use in continuing the contest any longer, and Mr. Stephenson was given the prize of £500 ($2500).

In 1829, the year of the famous trial of the *Rocket*, the Liverpool & Manchester Railway was opened. This line made a regular schedule of six trips a day. Later, lines were built from London to Birmingham and to Southampton. In 1836 Parliament authorized the building of 29 new railroads with 1000 miles of track altogether, and in 1842 even the queen consented to risk a ride on a train.

Today the British Isles have 21,000 miles of railroad track. They have some of the best trains in the world. The United States has 250,000 miles of track. With 25 times the territory of the British Isles, the United States has only about twelve times as much railroad.

Thus England changed from the England of Manors to Modern Industrial Great Britain

The story of England's transformation from a small farming country to a populous manufacturing country is a long one; it stretches over hundreds of years. For a thousand years the English serfs lived in their tiny manor villages. There they farmed their little plots of land, shut in from the outside world of Europe and Asia.

Then slowly after 1100 their modes of living changed. Their ways of working and trading changed. Gradually the serfs became free from their landlords and changed their occupations from farming to handicraft.

As farming declined, many crafts developed. There were few factories; most of the work was done in the homes of the villagers. Wool was spun into yarn and woven into cloth. Household utensils, farm implements, tools, and weapons were made in the little iron forges of the village blacksmiths. English craftsmen made fine pottery and furniture and established a reputation for the craftsmanship of England.

But until nearly 1800 practically all the work was done by hand. The crafts were handicrafts. There were few engines and almost no power-driven machines.

Then came the invention of the first practicable steam engine and the first spinning and weaving machines. Within 25 years inventors had learned how to propel road vehicles and steamboats, as well as how to operate machines. Within a century the whole English way of life was transformed. Craftsmen put aside their hand tools and their home crafts and became tenders of machines and wage-earners in factories. These were located only in larger towns and cities; so the villages declined and the cities grew.

The whole face of the country was changed. Coal-mining cities sprang up near the huge deposits of coal. Iron and steel mills developed. Scores of textile factories were built.

The new times demanded more efficient transportation. Roads were improved, canals were dug, and the communities of the British Isles were tied together by steam railroads.

Population increased by leaps and bounds once the Industrial Revolution was well under way. In the 100 years after 1800 the inhabitants of the British Isles increased in number, but the number and proportion of English people engaged in farming steadily decreased. Today four out of every five of the British people live in towns and cities.

Thus it was that the England of manors became the modern industrial Great Britain.

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CHAPTER IV

HOW GREAT BRITAIN BECAME THE PIVOT OF WORLD TRADE

In the 1500's Sir Walter Raleigh, an enterprising English explorer and trader, foretold England's future. After a trip to the new world of North America he said: "Whosoever commands the sea commands the trade of the world; whosoever commands the trade commands the riches of the world, and consequently the world itself."

Great Britain's history proves that he was right.

Her ships came to command the seas, and her traders commanded "the riches of the world." Great Britain became the very center of world trade and of the world's greatest empire. In the next three chapters we shall learn how that happened.

In ancient times the little island was called Britain. At that time it was peopled by half-barbaric tribes. At the southern ports of this island, which was then the far northern corner of the world, Roman traders used to stop, for Britain had tin to trade. Tin is one of the metals used in making bronze. In those days, before much was known of iron, bronze was the hardest metal for making weapons and tools. Even before the days of Julius Cæsar (55 B.C.) tin was mined in what is now Cornwall, England, and carried by Roman ships to Italy. In spite of these early contacts with other countries, however, England was not really a world trading nation until modern times.

For Centuries the British Isles, on the Edge of the Known World, had been Isolated

On the map of figure 7 you can see what an isolated position Great Britain had before the new world of America was discovered. The Mediterranean Sea was the center of the known world of that time. Such cities as Venice, Alexandria, Bagdad, and

Mosul were the trading cities of the world. Hundreds, even thousands of ships sailed the Mediterranean, and camel caravans loaded with precious stuffs padded back and forth between eastern Europe and western Asia.

But Britain had not much to offer traders, and she was not well located for trade. The Romans and the other ancients had considered Britain the "jumping-off place" of the world. In ancient Alexandria and in Europe during the early Middle Ages map-makers always assigned her a place on the northwest fringe of the world. Because she had so little contact with other civilizations she was regarded as the barbarian "backwoods" country of Europe.

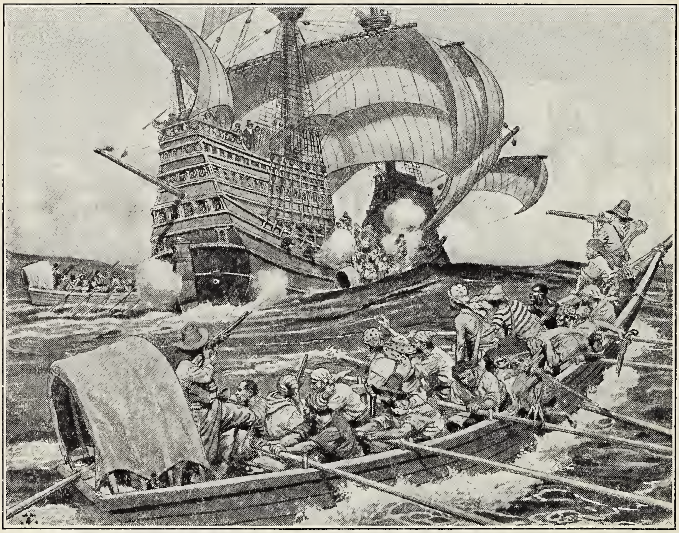


Fig. 30. Trading during the Middle Ages held many dangers. One of the greatest was the frequent attacks by pirates

Even later traders were not especially eager to sail up the Atlantic coast to call at little British seaport towns. They preferred to visit the Mediterranean cities within easy distance — cultured cities, where a merchant might enjoy himself during his stay on shore. If a trader of Genoa wanted to do a little buying and selling, he could take a trip of a few days to Marseille or to the nearer cities of Florence and Venice. He might go to Alexandria on the northern coast of Africa, where he could exchange his goods for those of traders from India, China, Persia, and Mesopotamia. If he were not willing to leave home at all, much trade would come to him; for Italy was the center of the business world.

An English merchant was not so fortunate. To be sure, occasional ships from Genoa, Venice, or the important city of Bruges called at British ports. The region now called Belgium, and especially the city of Bruges, was becoming a world trading center in the 1300's and 1400's. The cloth merchants of Bruges bought English wool and sometimes exchanged Italian goods for it. For the most part, however, English traders had to leave home to sell their goods. Often they found this very discouraging, for they had to take long, dangerous voyages through seas where pirate ships often attacked them, taking their merchandise and sinking their ships. Should they reach their destinations, they were likely to find the foreign traders only mildly interested in their goods.

The Great Age of Discovery enlarged the Known World and put the British Isles at the Very Center of World Trade

Then in 1493 came almost unbelievable news. Christopher Columbus, the daring Italian navigator, had explored the unknown seas and found a new land *west* of England, a land later called America. Others followed him, and soon the known world was enlarged to include two new continents across the sea, North America and South America.

English explorers also sailed westward to see this new land. John Cabot, a Venetian explorer in the service of the English king, discovered Newfoundland (1497). To be sure, the king gave him only ten pounds ($50) for his great discovery. But the people of England ran after him like mad. Many wanted to be members of the crew for his next voyage.

With these discoveries trade in every country became more active. Spain and Portugal, already great trading nations, sent out explorers and conquerors to bring back gold and other riches. These countries rapidly became very wealthy. Then in 1498

Vasco da Gama, an adventurous Portuguese sailor, by sailing south around Africa, found that traders could carry their goods to and from the East Indies, China, and India, entirely by water. The Mediterranean traders had been very jealous of their trade with the East and had done everything possible to hinder the western European traders in finding an all-water route thither. Now, however, a route to the Indies had been discovered over which they had no control.

From sailor to sailor, from town to town, and from country to country the great news flew. England was eager to increase her trade with Asia. With the discovery of the new waterway, she could now take an active part in the scramble for trade. English sailors enrolled in the crews of Portuguese vessels in order to learn the secrets of the route around the south of Africa. English merchants began to open trade relations with such distant places as Turkey, Russia, Guinea, and the north coast of Africa. England also determined to capture her share of the trade in the newly discovered lands to the west.

British Ports became Thriving Trade Centers in the 1500's

In every European country where trading was carried on, boatbuilding and seafaring became the great activities of the day. Naval yards and storehouses for goods were built. Harbors were dredged. Docks were constructed.

In England this new order of things was welcomed with the greatest delight. British boys in their teens took to the sea. British merchants gladly risked life and fortune to build up trade with the far corners of the earth. Bold English privateers the "Elizabethan sea dogs,"— Drake, Raleigh, Hawkins, and Gilbert,— made the sea none too safe for rival ships. Many a fine fortune they plundered from the Spanish fleets until foreign sailors trembled at the sight of a British flag. For years they preyed upon Spanish commerce, and carried home many rich cargoes. They engaged in slave-trading — buying black men in Africa and selling them to Spanish colonists in the West Indies or to wealthy men in Spain.

They were so daring and did so much damage to Spanish shipping that at length, because of this and for other reasons, Spain declared war on England. But she was unsuccessful. In 1588 the magnificent Spanish fleet, the Armada, which had been fitted out to crush the growing English sea power, was destroyed. One of England's most powerful rivals was checked on the sea. With added ambition the minds of Englishmen centered upon world trade.

More and more the little island found her trade with the outside world expanding. Her position in the world had changed. She was as near to the new trading land of America as any other European country except Spain and Portugal. She had many good harbors and fine ships. Her people had become skilled navigators, and they too knew the value of trade.

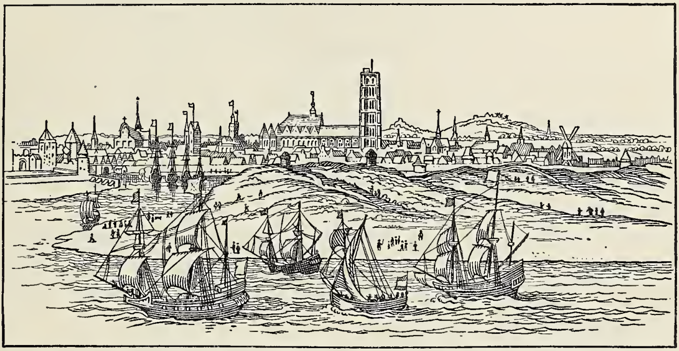


FIG. 31. Dunkirk, a flourishing English port in the 1500's. (Redrawn from an old print)

So England was now a sturdy rival to foreign traders. Men in England were willing to take great risks in the hope of making great profits. To deliver their valuable cargoes safely, the brave sea dogs risked their lives constantly in storms, battles with enemy ships, and many other perils. Fierce pirates still lurked along the coasts ready to attack them, and we today should consider their ships very small and frail to brave the dangers of the great ocean.

At home too people were risking their possessions, if not their lives, in England's trade. Rich ladies pawned their jewels that merchants might prepare ships for new ventures. People staked all their money on foreign trade in the hope that they might increase their riches manifold. Cargoes were valuable in those days, and once safely back in the home port they could be sold at enormous profits. If they never came back — well, one usually did not think of that, but rather of the profit that might be gained.

So it happened that many a fortune was made, and many a fortune was lost in trading. Business men took great chances and waited long in the hope that "their ships would come in."

BRITISH MERCHANTS FORMED TRADING COMPANIES

An example: the East India Company

One merchant alone would find the road to fortune hard. It was almost impossible for him to raise the large amount of money necessary to equip a boat for a two-year journey. Furthermore, a single boat was too much at the mercy of attacking pirates or rival ships from other countries.

Merchants solved that problem by forming companies which built fleets of ships, paid sailors to man them, and put on board food and other things necessary for long trips. These groups were called trading companies.

The East India Company was the best-known trading company. If its members who took to the sea did not drown or die of fever on a wild Asiatic coast, they became wealthy men. The early history of this company is a long tale of risks, courage and determination, fortunes and misfortunes. It lasted longer and made greater profits than most companies.

The East India Company was formed in 1600 by a group of English merchants who asked Queen Elizabeth for a charter giving them a monopoly of trade between England and India. The queen granted the charter. In 1601 four ships, its first trading expedition, set out. Two and a half years later the ships came back laden with pepper. Great profit was made.

More capital was obtained, and in 1604 the same four ships were sent out again. One was destroyed, but three returned, carrying rich cargoes of pepper, cloves, mace, and nutmeg. Great was the excitement among the members of the company.

Three more ships were sent out in 1607 but with little success. Two were sent out in 1608, but both were lost. Then in 1609 one ship sailed and returned a year later, bringing home such a valuable cargo that dividends of more than 200 per cent were paid to the fortunate partners! News of this success gave the East India Company a reputation for making fabulous fortunes, and it was now easy to raise capital.

Years passed and the fortunes of the Company went up and down. Some years it made money; other years it lost. When the ships succeeded in getting back to England the cargoes were in great demand. But how queer a record of these cargoes sounds to our modern ears. No iron, coal, meat, wheat, oil, etc., such as fill the holds of our ocean steamships today. Instead such unusual items as these: 3,000,000 pounds of pepper, 300,000 pounds of nutmeg, 1,500,000 pounds of saltpeter. Copper and tin were in demand, as were coffee, tea, green ginger, bamboo canes, Bengal silk, cotton yarn, and painted handkerchiefs. There was eager purchasing of such luxuries when an East India ship returned safely to England.

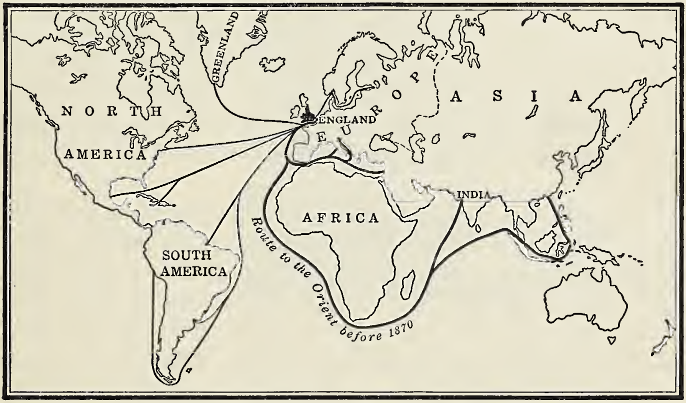


Fig. 32. England's paths of trade in 1700

Gradually, however, navigation became safer. More and more ships succeeded in getting back to England with cargoes. Steadily the Company began to make money.

Other companies were formed in the 1700's. Some built whaling ships and sent them to the waters around Greenland. The whaling industry was as uncertain as the trade with the Far East. Some years the companies were successful; other years they failed completely. But in spite of the failures of the companies English merchants continued to invest in them. Their ships continued to ply the seas to the far corners of the globe, and England's trade mounted, as the table shows.

Growth of English Trade, 1614–1750	
1614	$21,000,000
1701	62,000,000
1750	100,000,000

We see, then, that England had undergone great transformation. From being almost on the rim of the civilized world, she had become the center of world trade. Her convenient location, her good harbors, and her adventurous people equipped her for leadership. The English people have always liked the sea and the business of trading.

Of course this foreign trade helped the industries of Great Britain to grow. If English merchants were to get timber and spices and cotton from far lands, they must have manufactured goods to exchange for these things. So the craftsmen of Great Britain turned out more and more iron products, woolen and cotton goods, pottery, and household utensils, which the merchants sold largely in the countries where they purchased raw materials.

A Great British Merchant Marine was Built

Since Great Britain imported and exported so many goods, English business men found it profitable to build their own ships in which to carry these goods. The trading companies did this from the beginning. The early ships of the East India Company apparently were built on the motto "slow but sure." They were stanch, able to withstand wind and rough weather, and well armed to beat off pirates. But they were blunt and square, and so did not sail quickly. A voyage from England to India and back took two years or more. All through the 1600's and 1700's these slow, safe vessels were used.

THEN AFTER 1800 APPEARED THE "TEA CLIPPERS"

In early years tea was regarded as a great luxury. In 1664, for example, when the East India Company wanted to make a valuable present to the king, the gift of a little two-pound package of tea was chosen!

During the 1700's the English people learned to like tea, and by 1800 it was an important item of trade with the Far East. But the trade was seriously hampered by the very slow sailing of the freight ships. In the whole year that it took to sail from China to England much of the flavor of the tea was lost.

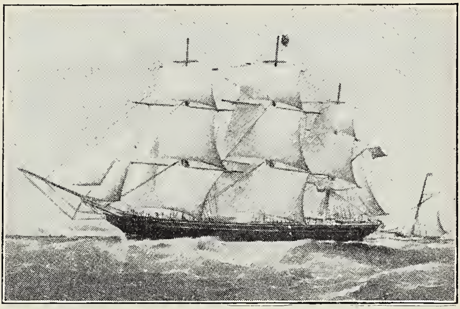


FIG. 33. Clipper ships, originally built in the United States, were soon copied by the English people, who saw the speed which their sharp bows and many sails enabled these ships to attain

By 1850 a new type of sailing ship which was being built in the United States was taking the eastern trade away from English vessels. These trim, slim vessels that flew over the water with an acre of white canvas winging them onward were called "tea clippers." England had to copy these if she was to keep her trade with the Orient. So copy them she did.

How rapid and dependable these boats were we can judge from the records they established. One record will illustrate the speeding up of ocean transportation. In 1866 five tea clippers left Foochow, China, on the same day. They arrived at the mouth of the Thames, in England, within a few hours of each other, 120 days later! England's clipper fleet had solved the problem of more rapid sailing.

Clipper ships were the wonder of their day. They required great skill in handling, and captains who sailed them told with pride of races they had with rival ships.

THEN CAME STEAMSHIPS MADE OF STEEL

But sailing vessels — even clippers — depended on wind and weather. Records of crossing from China to England in four months were made only under the most fortunate conditions. Too often wind and storms delayed them, even drove them off their course. The shipping companies felt that they must have more reliable means of transportation.

In the early 1800's there were rumors of vessels propelled by steam engines. Robert Fulton's *Clermont* began to ply on the Hudson, and there were steamboats even on the Ohio and Mississippi. Why not ocean steamships running on regular swift schedules, propelled by "bought wind," as the sailors called the steam? "Why not, indeed?" thought the more progressive shipbuilders, and they began building them for passengers and trade.

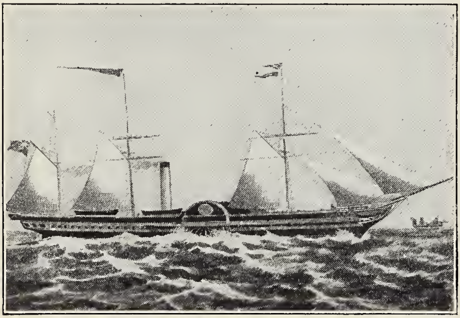


FIG. 34. This steamship was built in 1840 for British trade. There was not yet enough confidence in steam power to build the new ships without sails, which could carry them to their ports should the engines break down

In 1838 an English vessel, the *Great Western*, crossed the Atlantic to New York under the power of steam alone. On its return trip to England it carried 68 cabin passengers and 20,000 letters. It made the journey in fifteen days.

This helped to convince the shipping companies of the advantages of using steam. Of course, sailing ships did not altogether disappear. The power of sails was cheap and gave fairly swift transportation. Even today there are many large sailing vessels traversing the ocean.

But steam engines took the place of sails, and ships made of iron and steel replaced the old wooden boats and even the trim clippers. This helped Great Britain to maintain her position as mistress of the seas — a position which the American fleet of clippers had been

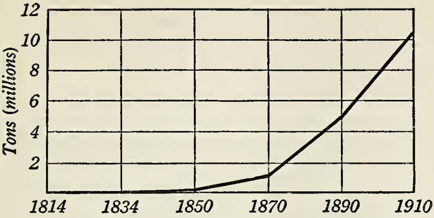


FIG. 35. Growth in total tonnage of British steam vessels, 1814–1910

challenging. Great Britain, as you remember from your earlier studies, had led the United States in the production of iron and steel, and so could produce iron and steel boats more cheaply than could the United States.

So, as factories multiplied in the 1800's, as more coal was mined, and as more steel was made and more railroads constructed there was a demand for ships and more ships — to carry the products of mine and factory away from England; to transport food and raw material to England's factories. Great Britain's merchant marine grew and grew, and her position as mistress of the seas remained unquestioned.

After 1850 her fleets of steamships increased in size and power (see figure 35). Long before the World War their tonnage amounted to more than one third of that of the entire world. This is still true (see figure 36). In 1928 self-propelled vessels (that is, steamers and motor ships) of the world totaled over 65,000,000 tons. The British ships of the same kind totaled over 22,000,000 tons. Which country stood second? Which one stood third?

Great Britain was not increasing her merchant marine without reason. Her trade was being carried on with an increasing number of ports. Many ships were needed if all the ports were to be reached without too much delay.

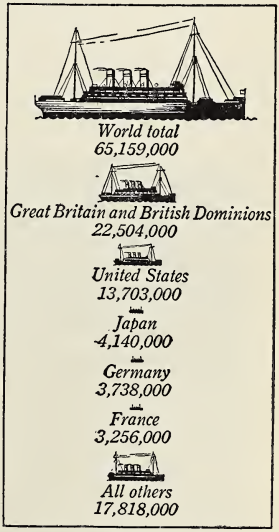


FIG. 36. This graph shows the total tonnage of steamers and motor ships of the world. It also shows the tonnage for several different countries. The figures are for 1928. Note the comparison between the tonnage of British vessels and that of the United States, Japan, France, and Germany

AS THE INDUSTRIAL REVOLUTION WENT ON AFTER 1800, GREAT BRITAIN SOLD LARGER AND LARGER AMOUNTS OF GOODS TO OTHER COUNTRIES

VALUE OF COTTON GOODS EXPORTED FROM GREAT BRITAIN	Annual Average
1829–1831	$87,854,220
1859–1861	238,140,000
1889–1891	350,474,040
1911–1913	598,591,620
1920–1921	1,410,372,000

Perhaps you thought that the table on page 86 showed that Great Britain's trade had grown large by 1750. It had in comparison with the trade of earlier days, but it was small when compared with the trade that developed after 1800. After engines and machines were invented and their use became widespread, the output of coal mine, iron foundry, and textile factory increased at an astonishing pace. The people of Great Britain could not possibly buy all the goods that were being produced. What was to be done with the surplus products? They must be exported; that is, they must be taken to foreign lands to sell.

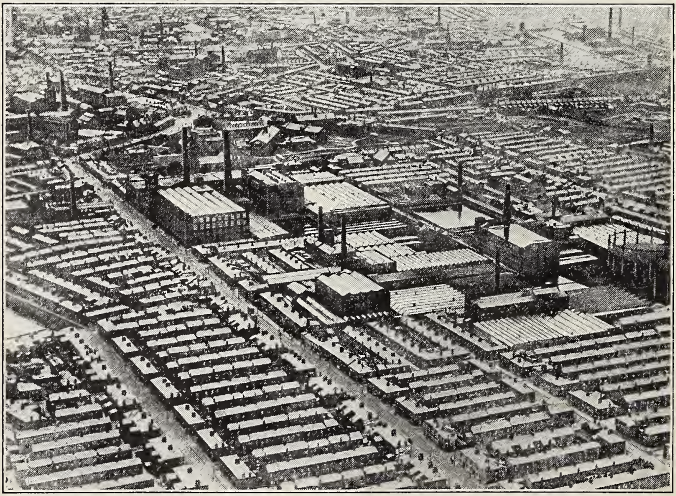


FIG. 37. Not only does Manchester (see figure 28) produce great amounts of cotton, but Preston, shown in this picture, is also an important cotton-manufacturing center. Many hundreds of mill workers' homes lie centered about the factories whose tall chimneys you see in the picture

You have seen that in 1750 all of Great Britain's world trade amounted to only $100,000,000. Compare this amount with that for the trade in cotton goods alone, as shown in the table on page 90. These figures are the yearly averages between certain dates. That is to say, the yearly exportation of cotton goods in 1911, 1912, and 1913 averaged $598,591,620. The increasing amounts in the figures suggest that spinning and weaving factories were spreading over England after 1800. They suggest that more people were toiling in factories, that new inventions and more efficient machines and engines were being made. Businesses were growing too large for their factories, and corporations were acquiring more capital. The great world trade in cotton goods grew until today Great Britain sells to other countries $1,000,000,000 worth of manufactured cotton goods each year.

Great Britain's trade in other manufactured goods mounted, also. In the production of steel rails, machines, tools, implements, and other goods made from iron and steel she led the world until nearly 1900. Great Britain has become a huge factory that turns raw materials into finished products. The English people sell these products to the people of other countries. With the money paid for them, they buy the food, raw materials, and other things that their way of life demands.

Great Britain also had Tremendous Stores of Coal to sell to Other Peoples

We saw that coal played a tremendous part in the building up of the United States as an important industrial country. It has played an even more important part in England's development.

In 1870 British mines produced as much coal as those of all other countries together, including the United States. Until 1900 Great Britain was the greatest coal-miner of the world. Shortly after that time, however, the United States surpassed her. Nevertheless, year by year Great Britain has continued to mine great amounts of coal.

Did she use it all herself? No, her coal-owners sold much of it to business men in other countries. By means of the profits obtained from the sale they were enabled to pay for part of the huge quantities of food, cotton, iron, rubber, timber, wool, and other things which were imported.

Without coal it would have been impossible for England to become a great manufacturing country. Without coal it is doubtful if her population would have grown so large, and if so many of her people would have left the farms and gone to work in the factories of her cities.

Great Britain's vast coal supply helped her shipping industry also. The power in coal propelled her ships. Coal also made it possible for her to keep her vessels filled with freight both going from and returning to England. Let us see how that happened.

We learned in our study of American civilization that ship-owners arrange the sailings of their vessels so that cargoes can be carried both ways between the various ports. Empty ships mean loss of money; so ship-owners want their ships well loaded with cargoes. Now the goods which were imported into Great Britain — iron, wheat, timber, etc. — were bulky goods which took up a great deal of space in ships. The goods which were exported from Great Britain, however, such as cloth and other manufactured articles, took up a small amount of space. With what could English ship-owners fill the empty holds?

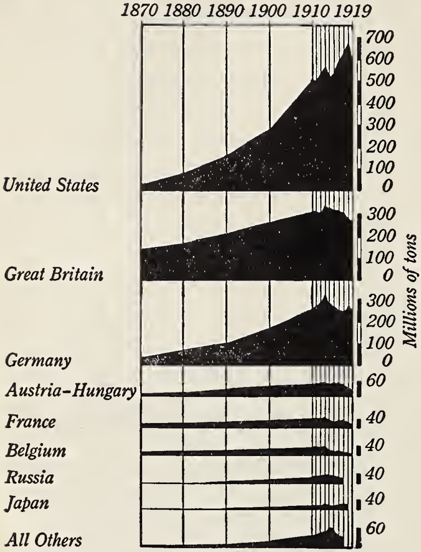


Fig. 38. This graph shows the amounts of coal produced by the leading industrial nations from 1870 to 1919. The height of the blackened area under any given year shows the amount produced. Note that the United States, Great Britain, and Germany increased the amount of their coal production very rapidly. The other countries have increased the mining of coal very slowly

Coal! Argentina would buy coal. India would buy coal. Great Britain's island naval bases also needed coal. So coal could be added to the cargo of a boat carrying manufactured goods to other lands. Thus the ships carried full cargoes both to and from the ports. Most of Great Britain's exports were light, compact, manufactured products and heavy, bulky coal. Her imports were heavy, bulky raw materials of iron, timber, cotton, and foodstuffs. These balanced very well. No wonder British shipping proved a profitable business.

An Important Result of the Industrial Revolution: Great Britain came to depend on the Outside World for Food

In Chapter III we noticed the astonishing increase in the population of Great Britain after 1801. At that time the population was only about 10,500,000. One hundred years later it was more than 37,000,000. What an amazing increase in population during the nineteenth century!

But, as you also learned in Chapter III, from the beginning of the Industrial Revolution people left the farms of England to go to the cities to work. So in spite of the fact that people were multiplying rapidly in the little island, less and less food was grown there. This is clearly shown by the number of acres of land plowed and planted. Until about 1871 the amount of land under cultivation did not decrease. In that year 18,400,000 acres of farm land were cultivated. From that time on, however, less and less land was farmed. By 1914 only 14,300,000 acres were planted — a decrease of 22 per cent since 1871.

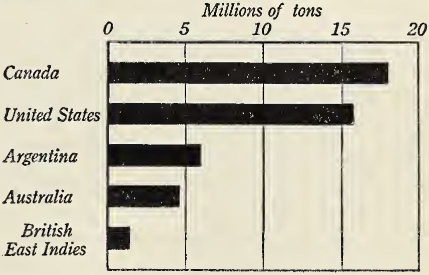


Fig. 39. This graph shows where the wheat is produced which feeds Great Britain's millions of city dwellers

The wheat crop shows a startling decrease — startling because the English people eat much bread made from wheat. In 1870 almost 4,000,000 acres of land were sown to wheat. The number of acres of land devoted to wheat 40 years later had decreased more than 50 per cent. Barley, oats, potatoes, and other principal foods showed the same decrease. While food crops had *decreased* more than 50 per cent, population had *increased* more than 50 per cent!

By 1914, when the World War broke out, so many people had left their farms that *only 6 per cent of the English workers were farming the land.* From these facts we can see clearly that hundreds of hungry city workers could not be fed by English farmers. *Food as well as other raw products had to be brought into Great Britain from other parts of the world.*

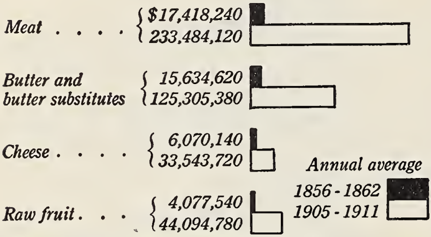


FIG. 40. Principal imports of food other than wheat. Compare the length of the bars for the years 1856–1862 with those for 1905–1911. These bars represent *annual* averages of imports. They make clear the fact that Great Britain grew dependent upon other parts of the world for her food supply as her people turned more and more to manufacturing

Thus, in giving up most of its agriculture and becoming a manufacturing nation, Great Britain has become dependent upon the outside world for a great deal of its food. Startling examples of this dependence upon other countries show how true this was even more than 25 years ago.

> In 1865 the British Isles imported 135 pounds of wheat per inhabitant.
>
> In 1905 the British Isles imported 261 pounds of wheat per inhabitant.

Four fifths of the wheat used by the British comes from the United States, Canada, far-off Australia, and Argentina.

For other basic foods also the British Isles depend on foreign lands. Even before the World War 40 per cent of the meat was imported from abroad. Year by year larger amounts of eggs and other dairy products were also brought in from other countries.

GREAT BRITAIN DEPENDED ON THE OUTSIDE WORLD FOR MANY RAW MATERIALS ALSO: COTTON, IRON ORE, RUBBER, ETC.

1. A cotton-manufacturing country must have supplies of raw cotton. Does Great Britain raise cotton?

You remember that even before 1800 English spinners and weavers were making cotton thread and cloth as well as woolen textiles in their homes. Of course cotton did not grow in the northern, damp climate of Great Britain. The English clothiers, therefore, had to send ships to get the raw cotton from distant lands. Huge amounts were brought in after 1800 from the three important cotton regions of the world: (1) the Southern states of the United States, (2) India, and (3) Egypt. The cotton-goods industry grew rapidly, machine manufacturing took the place of hand weaving, and thousands of English laborers depended for their very lives upon a continuous supply of cotton from these foreign lands.

So great was the output of England's factories that, even in the late 1700's, there was not enough raw cotton in the world to keep the spinners and weavers busy. The chief reason for this was that cotton could not be picked, cleaned, and prepared rapidly enough to keep the workers and their machines occupied. In distant countries many dark-skinned people toiling under the hot sun picked the cotton by hand. The cleaning also was done by hand. Before the cotton could be spun, every seed had to be removed. This was such slow and tedious work that all the laborers in the many cotton fields could not pick and clean enough cotton to feed the hungry English machines.

Then in 1793 Eli Whitney, an American schoolmaster, saved the situation for English cotton spinners and weavers. He invented the *cotton gin*, a machine which made it possible to clean cotton many times more rapidly than by hand. As a result of this important invention the Southern section of the United States began producing larger and larger quantities of cotton for the English factories, until they were supplying 85 per cent of the cotton used in England. Within 50 years so many improvements had been made in English machinery that British factories were demanding ever increasing amounts of raw cotton.

The left circle of the graph, figure 41, shows that the United States, India, and Egypt are the three largest producers of raw cotton. From these three places Great Britain continues to import most of its supply. Upon these distant countries the British cotton-workers depend today, as they did 100 years ago, for their very existence. If their work is to go on, the spinning and weaving factories must be kept supplied with cotton. If anything prevents cotton from being raised in these regions, the lives of millions of English people are endangered. To them plenty of raw cotton means work — food, clothing, and shelter.

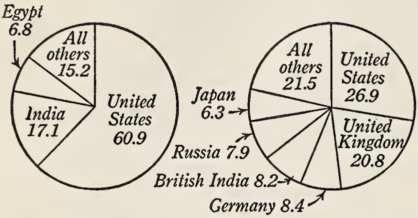


FIG. 41. The circle on the left represents the world's cotton production. It shows the countries which produce the greatest amounts of raw cotton. The circle on the right represents the production of cotton cloth. It shows the countries which manufacture the greatest amounts of cotton cloth

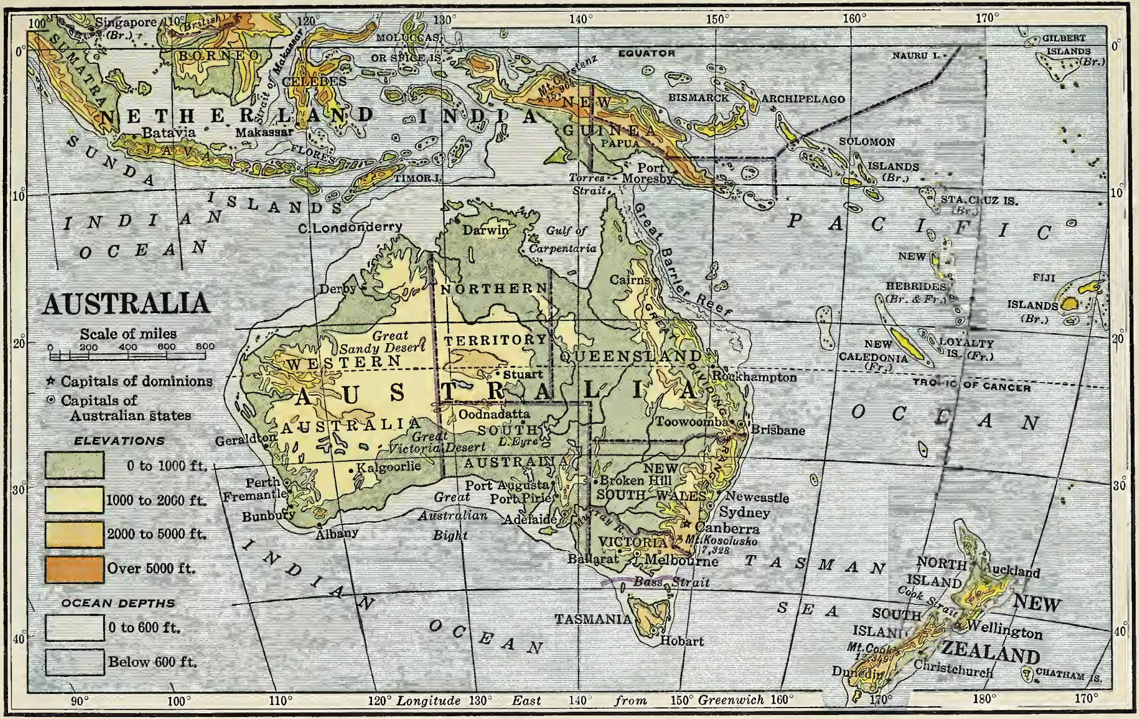
This interdependence of the cotton-growing and the cotton-manufacturing regions is well illustrated in the following newspaper clipping:

Cotton Shortage in United States Hurts British Mills

BOLL WEEVIL RAVAGES IN AMERICA CAUSE UNEMPLOYMENT FOR LACK OF RAW MATERIAL

WASHINGTON, December 4. — A crisis in the English cotton industry has been brought about by the ravages of the boll weevil in the cotton fields of the United States, combined with the European situation and conditions in the world generally, according to the Department of Agriculture. Reports to the department forecast hard times in the English cotton centers this winter.

Thousands of men and women in Lancashire are working half time, these reports state, and some mills are running at a loss to retain their skilled employees pending a return of good times. One trade-union secretary estimates 40,000 workers have left the industry for good. India and China, Lancashire's largest customers for piece goods, can now buy only a fraction of the quantity they purchased before the war.


AUSTRALIA
Scale of miles
0 200 400 600 800
★ Capitals of dominions
⊙ Capitals of Australian states
ELEVATIONS
0 to 1000 ft.
1000 to 2000 ft.
2000 to 5000 ft.
Over 5000 ft.
OCEAN DEPTHS
0 to 600 ft.
Below 600 ft.
NETHERLAND INDIA
SUMATRA
Singapore (Br.)
BORNEO
British
CELEBES
Strait of Makassar
Makassar
Batavia
JAVA
FLORES
TIMOR I.
SUNDA ISLANDS
MOLUCCAS OR SPICE IS.
EQUATOR
NEW GUINEA
Mt. Carstenz 15,964
PAPUA
Port Moresby
Torres Strait
BISMARCK ARCHIPELAGO
SOLOMON ISLANDS (Br.)
NAURU I.
GILBERT ISLANDS (Br.)
STA. CRUZ IS. (Br.)
NEW HEBRIDES (Br. & Fr.)
FIJI ISLANDS (Br.)
NEW CALEDONIA (Fr.)
LOYALTY IS. (Fr.)
TROPIC OF CANCER
PACIFIC OCEAN
INDIAN OCEAN
C. Londonderry
Darwin
Gulf of Carpentaria
Derby
Cairns
Great Barrier Reef
NORTHERN TERRITORY
QUEENSLAND
GREAT DIVIDING RANGE
Rockhampton
Great Sandy Desert
WESTERN AUSTRALIA
AUSTRALIA
Stuart
Oodnadatta
SOUTH AUSTRALIA
L. Eyre
Great Victoria Desert
Toowoomba
Brisbane
Geraldton
Kalgoorlie
Perth
Fremantle
Bunbury
Albany
Great Australian Bight
Port Augusta
Port Pirie
Adelaide
Broken Hill
NEW SOUTH WALES
Newcastle
Sydney
Canberra
Murray R.
Mt. Kosciusko 7,328
VICTORIA
Ballarat
Melbourne
Bass Strait
TASMANIA
Hobart
TASMAN SEA
NEW ZEALAND
NORTH ISLAND
Auckland
Cook Strait
Wellington
SOUTH ISLAND
Mt. Cook 12,349
Christchurch
Dunedin
CHATHAM IS.
100° 110° 120° 130° 140° 150° 160° 170°
0° 10° 20° 30° 40°
90° 100° 110° 120° Longitude 130° East 140° from 150° Greenwich 160° 170° 180° 170°

2. An industrial country needs large supplies of iron. Has Great Britain enough iron to supply her needs?

From your study of American civilization you have learned the great importance of iron to an industrial country. You know that without it cities cannot exist and railroads and ships cannot be built. It is the one material upon which factories are absolutely dependent. Without machines a modern factory cannot exist. Without iron, machines cannot be made.

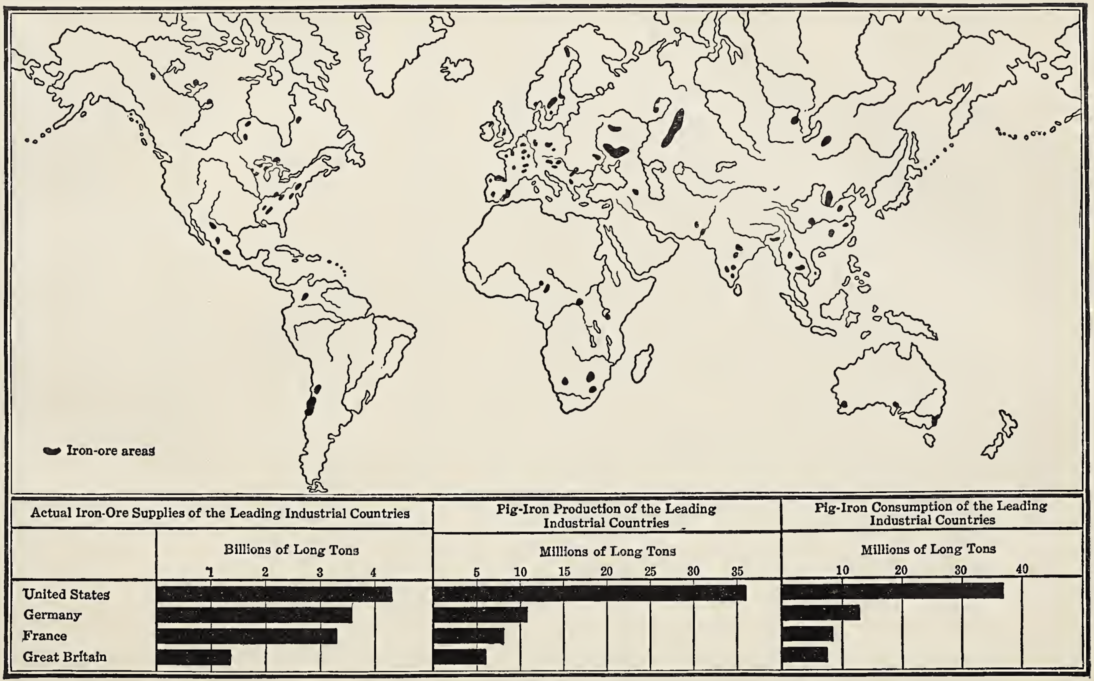
The bar graphs and map of figure 42 tell us of England's supplies of iron ore today. She has always had some ore. For a long time before the Industrial Revolution she had enough for her own needs. She did not require much — merely enough for utensils, tools, implements, and weapons. But with the invention of machines and with England's rapid transformation into a manufacturing nation her need of iron and other materials with which to make steel greatly increased.

There are some important questions that you should try to answer for yourself in order to understand England's dependence upon other countries for iron ore. These can be answered from the map and graphs, figure 42.

1. Does Great Britain have within her boundaries large supplies of iron ore? How do these supplies compare with those of other leading industrial countries?
2. Does Great Britain produce a large amount of pig iron? How does this compare with the amount produced by other countries?
3. Does Great Britain produce all the iron that she needs for her manufactured goods? What European countries produce more iron than they consume?

Does Great Britain depend on Remote Parts of the World for Other Raw Materials?

In *An Introduction to American Civilization* we learned that our own country possesses vast supplies of important natural resources — coal, iron ore, etc. Nevertheless we found that even the United States is very dependent on other parts of the world for many raw materials. Great Britain is even more dependent on other countries than we are.



Iron-ore areas
Actual Iron-Ore Supplies of the Leading Industrial Countries
Billions of Long Tons
1
2
3
4
Pig-Iron Production of the Leading Industrial Countries
Millions of Long Tons
5
10
15
20
25
30
35
Pig-Iron Consumption of the Leading Industrial Countries
Millions of Long Tons
10
20
30
40
United States
Germany
France
Great Britain

FIG. 42. The iron resources of the world

First, the materials with which steel is made

You already know that Great Britain as an industrial country needs great quantities of iron and still is dependent on Spain and Sweden for much of the iron ore which she turns into pig iron. In addition she depends upon regions on every continent for materials used in the making of steel.

You have already learned that steel is an alloy, that is, a mixture of iron and other metals — for example, chromium, tin, and nickel. Great Britain, like the United States, does not possess adequate supplies of these important ores; so she is compelled to send her ships to every corner of the globe after them. Picture to yourself ships on all the oceans bringing to British ports nickel from Canada; chromium and iron ore from Spain, Asia Minor, and India; manganese from central Europe; tin from Australia and the Malay States; vanadium from South America; etc.[1]

Second, rubber

A modern industrial world rides on rubber. In Great Britain there are many automobiles and motor trucks. Without rubber for tires and for other parts of the automobile motor travel would be impossible.

Rubber is also used in the air brakes of Great Britain's trains and in the "packings" of her many steam engines. Transportation and communication depend upon rubber. The very life of communities depends upon it.

Not a pound of rubber is raised in Great Britain. A vast proportion of all the rubber that Great Britain uses is raised on plantations in far-off Ceylon or in the Malay States, Java, Borneo, and other islands in that tropical region. English business men own these plantations. Three fifths of the world's rubber is produced there. Most of the rubber-producing land lies within the boundaries of the British Empire. (Compare the map showing the British Empire with figure 316 in *An Introduction to American Civilization.*)

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[1] In *An Introduction to American Civilization*, figure 111 will suggest to you a world map which you could draw showing England's dependence upon other regions for the ores that are needed in the making of different kinds of steel.

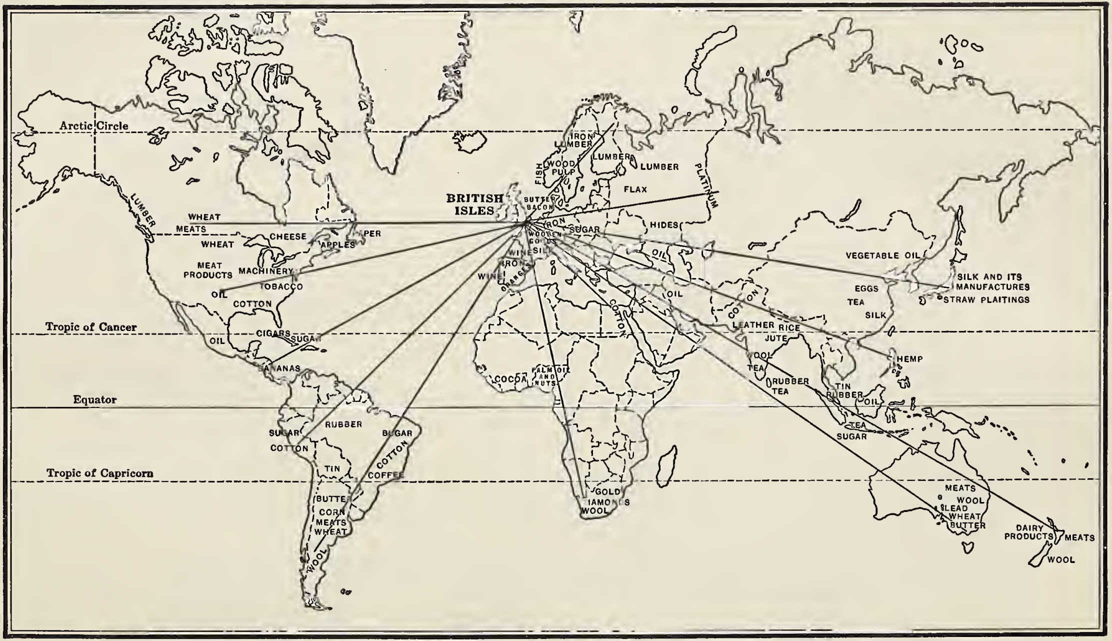
Arctic Circle
Tropic of Cancer
Equator
Tropic of Capricorn
BRITISH ISLES
LUMBER
WHEAT
MEATS
WHEAT
MEAT PRODUCTS
OIL
CHEESE
APPLES
PER
MACHINERY
TOBACCO
COTTON
OIL
CIGARS
SUGAR
ANANAS
RUBBER
SUGAR
COTTON
BUGAR
COTTON
COFFEE
TIN
BUTTE
CORN
MEATS
WHEAT
WOOL
IRON
LUMBER
FISH
WOOD PULP
LUMBER
LUMBER
FLAX
PLATINUM
BUTTER
BACON
RON
SUGAR
WOOLEN GOODS
WINE
SILK
IRON
WINE
ORANGES
HIDES
OIL
OIL
COTTON
COCOA
PALM OIL AND NUTS
GOLD
IAMONDS
WOOL
COTTON
LEATHER
RICE
JUTE
WOOL
TEA
RUBBER
TEA
VEGETABLE OIL
EGGS
TEA
SILK
SILK AND ITS MANUFACTURES
STRAW PLAITINGS
HEMP
TIN
RUBBER
OIL
TEA
SUGAR
MEATS
WOOL
LEAD
WHEAT
BUTTER
DAIRY PRODUCTS
MEATS
WOOL

FIG. 43. Great Britain's dependence on the world for raw materials. All these regions help to keep her factories running and to feed her millions of people

Third, oil

Oil, we have already learned, is the second most important fuel used by industrial nations. In recent years Great Britain, like the United States, has come to use great quantities of oil. Ninety per cent of her naval vessels and a large per cent of her merchant ships are now propelled by oil-burning engines. On the streets of her cities and towns are many automobiles and motor trucks driven by gasoline engines. Many of her manufacturers are now burning oil to run the engines in their factories.

Great Britain is one of the world's great consumers of oil. Does she produce the oil she needs? Far from it. Small amounts of oil have been gathered from English wells and springs for hundreds of years. But if you will turn to *An Introduction to American Civilization*, figure 79, you will see that not a single important oil-producing field lies in the British Isles. For oil Great Britain is dependent on the United States, Mexico, Russia, Persia, the Dutch East Indies, Venezuela, Rumania, and Mesopotamia. These are the eight chief oil-producing regions of the world.

Fourth, Great Britain's dependence on foreign countries for other things

Space is lacking to enumerate the many kinds of foods and other raw materials for which Great Britain is dependent upon the outside world. Her people, like our own, are great tea and coffee drinkers. For tea they depend upon China, Japan, Ceylon, and other regions of the Far East. Their coffee comes from Brazil, Central America, Mexico, and the West Indies. Like other modern peoples, the English use large quantities of sugar. Practically all of this is brought from Europe or from the West Indies and other distant lands.

The American dinner table is sometimes described as a "League of Nations," because in the United States millions of families include in their diet foods imported from many other parts of the world. To the same degree we could apply the name to an English dinner table. The English also have a high standard of living. They have become accustomed to various kinds of foods, many of which cannot be produced in Great Britain. For example, they like figs, dates, lemons, bananas, coconuts, cocoa, chocolates, almonds, peanuts, walnuts, olives, and a host of other things, all of which have to be shipped from distant lands.

As the income of the English people increased during the nineteenth century, they became accustomed to a greater variety of comforts and luxuries. Clothing, for example, became more varied. New kinds of materials from other regions were used. Household utensils increased in number and in variety, many of them being made from materials brought from Asia, Africa, North America, — indeed, from every continent. Thus England's standard of living and her dependence upon other lands increased at the same time.

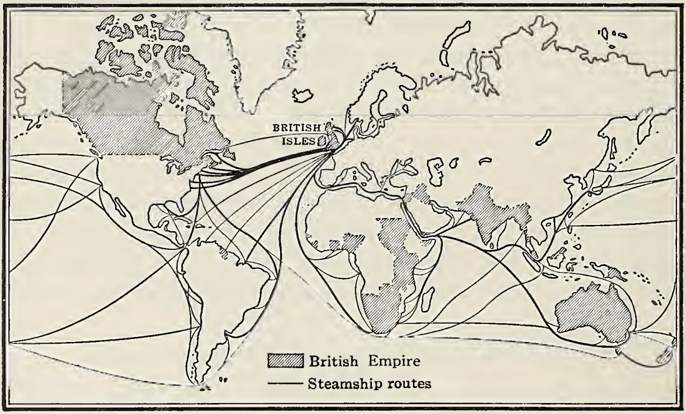

FIG. 44. The trade routes of the world today. The width of the lines indicates the importance of the trade which is carried on over them

We have studied four important factors which helped Great Britain to become the center of world trade

1. Great Britain was located in a favorable position to carry on sea trade with the modern world.

2. She was the first country to adopt machine manufacturing on a large scale.

3. She built up a great shipping industry.

4. She had vast supplies of coal to supply power for her ships and factories, and to sell to other countries.

So Great Britain became the hub of world trade.

From being a little "backwoods" country on the far edge of the known world, she is now very favorably located for the exchange of goods between the peoples of the earth.

From being a primitive agricultural country, she became the world's leading miner of coal and its chief manufacturer of goods.

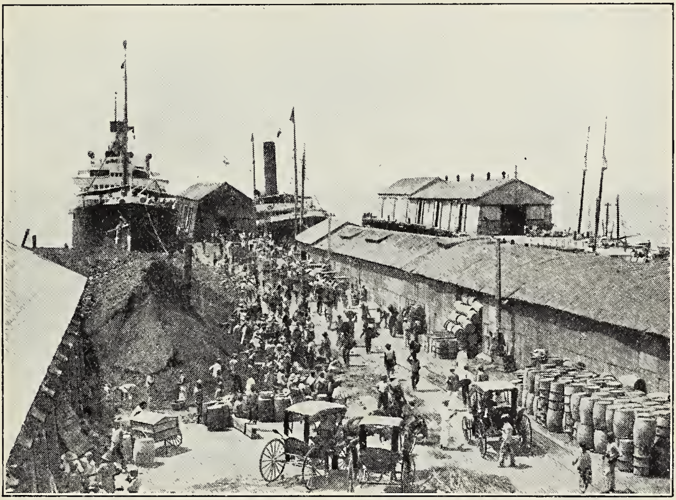

Fig. 45. A port in the West Indies. The largest ship is British. These ships are to be found in all the important ports of the world

From being isolated and self-sufficient, producing her own food and other necessities, she became dependent on the remotest regions for her very existence.

From being a country of scattered farms and small towns, she became a country of densely populated cities.

From being a country whose people had only the barest necessities of life, she became a wealthy country where the standard of living was higher than in any other country except the United States.

We can sum up the whole matter clearly in a map of world trade. (See figure 44.)

Do you see how Great Britain stands out as the center of world trade? Note how hands of trade, like arms and fingers, reach out from England across the seas to distant lands. With these great arms and fingers she gathers up products from all parts of the world and sends out her own goods in exchange.

Note the heavy band of trade across the Atlantic between England and the United States. It shows that the trade between these two countries is greater than that between England and any other country in the world.

Note the second heavy band of trade running from England around Spain through the Mediterranean, the Suez Canal, down between Asia and Africa, and then off to the Far East. In the next chapter we shall learn the very great importance of this path of sea trade.

Note likewise the fairly heavy paths of trade from England to various points in South America and around the coast of Africa to the Orient.

So tremendous was Great Britain's trade over these routes in the year before the World War began, 1913, that exports and imports totaled nearly seven billion dollars ($7,000,000,000)!

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*Allen, Nellie B. Europe. Ginn and Company, Boston, 1928. See Chapter II (Ships and Shipbuilding).

Bacon, Edwin M. The Boy's Hakluyt (New edition of "English Voyages of Adventure and Discovery." Retold from Hakluyt). Charles Scribner's Sons, New York, 1910. Thrilling stories of England's early bid for sea mastery.

*Chatterton, E. Keble. Ships and Ways of Other Days. J. B. Lippincott Company, Philadelphia, 1924. Chapters IX–XIII include a good description of changes in English ships since the 1400's.

Daniel, Hawthorne. Ships of the Seven Seas. Doubleday, Page & Company, New York, 1925. A story of the remarkable development in ships from slow sailing vessels to swift ocean liners.

Day, Clive. History of Commerce. Longmans, Green & Co., New York, 1922. For rapid readers.

Finger, Charles J. (Editor). Heroes from Hakluyt. Henry Holt and Company, New York, 1928.

Fletcher, R. A. Steamships and their Story. J. B. Lippincott Company, Philadelphia, 1910. An excellent book, well written and well illustrated. Chapters III–X portray the startling growth of England's shipping industry.

HOWDEN, J. R. The Boys' Book of Steamships. Frederick A. Stokes Company, New York, 1913. An interesting book, describing the development of modern vessels.

*LUBBOCK, BASIL. The Log of the *Cutty Sark*. Charles E. Lauriat Company, Boston, 1924. A thrilling, true story of a tea clipper that plied between England and the Far East.

*SELFRIDGE, H. GORDON. The Romance of Commerce. Bridgman, Publishers, Pelham, New York, 1928. An excellent, illustrated book on trade for rapid readers. See Chapters VIII–XXII.

Magazine Articles

*"Bases of British Strength," *Literary Digest*, March 11, 1922, pp. 31–33.

*"One Hundred British Seaports," *National Geographic Magazine*, January, 1917, pp. 84–94.

CHAPTER V

GREAT BRITAIN MADE INDIA THE CENTER OF A WORLD EMPIRE

The Island Kingdom became Mistress of One Fourth of the Earth

The proprietor of the Paola House, Paola, Kansas, settled back in his armchair with an air of self-satisfaction.

"I tell you, England wouldn't last a month if we stopped shipping goods to her. That little island! Why, look at the size of her — not much larger than this state of Kansas; and look at the way she's fixed — depends on other countries for nearly everything she uses."

A discussion was well launched. The proprietor was questioning England's position in the world today. One of his listeners was defending her. Four traveling salesmen, marooned in the small town over the week-end, were forced to lend unwilling ears to the argument.

Presently a pleasant voice took up England's cause. Everyone turned his head immediately and mentally classified the newcomer as an Englishman.

"Do you know, sir," said the stranger, "that 'little' England is the greatest trading nation in the world, that she exports even more coal than the United States? Do you realize that for 300 years she has been the greatest manufacturer of woolen goods in the world — that she has more than 14,000,000 sheep right now?"

"Yes, that's all right," came from one of the salesmen, who had begun to show interest as soon as the Englishman spoke. "England's got lots of cloth and steel mills, but"— triumphantly —"you can't eat wool and steel. What about wheat and corn and meat? Why, I understand that the British Isles together don't raise one fourth of the wheat they need to keep their people alive!"

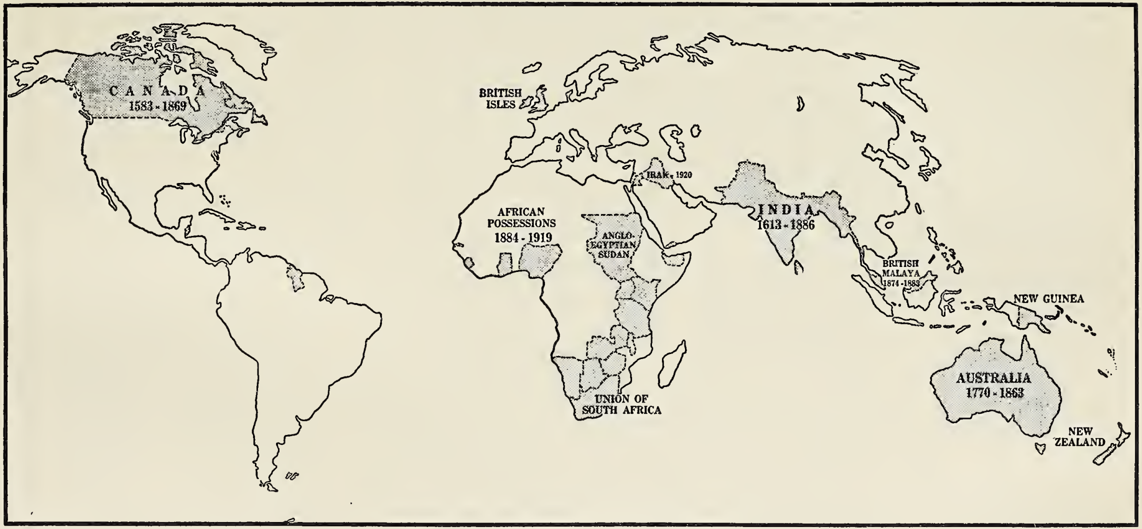
C A N A D A
1583 - 1869
BRITISH ISLES
IRAK, 1920
AFRICAN POSSESSIONS
1884 - 1919
ANGLO-EGYPTIAN SUDAN
UNION OF SOUTH AFRICA
I N D I A
1613 - 1886
BRITISH MALAYA
1874 - 1888
NEW GUINEA
AUSTRALIA
1770 - 1863
NEW ZEALAND

FIG. 46. Lands in every continent of the earth are included within the British Empire. The principal ones, and the dates when they became a part of the Empire, are given in the map

"That's true enough — our islands depend on other parts of the world for food. If we should be completely blockaded, we'd be starving in a month. We probably haven't got a month's food supply in England right now. But let me tell you, it's pretty difficult to carry through a blockade; and you know why — the British navy. The greatest navy in the world!"

"You're right *there*," broke in another of the salesmen, who evidently enjoyed reading history in his spare time. "England's been mistress of the seas for over 300 years — ever since she whipped the Spanish Armada — except for those two or three years about 1660 when the Dutch were strong enough to fight her successfully right in the English Channel. I remember enough history to know that."

"Sure," the proprietor replied, still unconvinced. "Sure. But we're not talking about war — about absolute blockades. We're talking about not trading with England, and I say she couldn't live a month without the trade of other nations. Suppose Argentina should decide not to ship wheat to you, and to buy our coal instead of yours — we *could* sell her what she needs, you know. Suppose she should — what would you do? And to clinch the argument, you know perfectly well, don't you, that England doesn't raise a pound of cotton, for all the millions of yards of cloth that she manufactures, uses, and sends abroad each year?"

"Yes," the Englishman agreed with a smile, "yes, not a pound. We bring it all in from the outside."

"Well, then, how can you think England would outlast a trade boycott? We shouldn't have to blockade her; we could simply stop trading with her. You know the people who favor the League of Nations say that that's one way to make a country come to time — just stop trading with her and soon she'll have to do as the other countries think she ought to."

"That theory wouldn't work in the case of England, my dear fellow. You'd have to defeat her navy first. You know Great Britain has colonies and ships. She doesn't need to trade with other countries — that is, foreign ones. Every foreign ship in the world could refuse to sail into a British port, and we could still secure the food, cotton, and other things that we need to keep going.

Are you surprised? You needn't be. Don't forget our great merchant marine. Do you realize that the British Empire has more ships and cargo sailing under her own flag than any other country in the world? Yes, we are mistress of the seas because we have both a great navy and the greatest merchant marine."

"But," insisted the proprietor, "if an embargo were declared against you, your ships couldn't get into the ports of other countries to get the goods."

Again the smile came over the confident Englishman's face. "Oho! By 'other countries' you mean foreign countries. Yes, their ports, of course, would be closed to us. But you forget the *British Empire*. We control ports in nearly every part of the earth. We can get millions of bales of cotton from India and millions of bushels of wheat through the ports of Canada and India — both of which are parts of the British Empire. We could get wheat and cattle from Australia, too, and spices and tea from Ceylon, and rubber for our great rubber factories from the Malay States. These also are parts of the British Empire. Why, men, London is the most important trading city in the entire world for the rubber, tea, spices, jute, and other Oriental goods that come from certain ports in the East. And do you realize that the great port of Hongkong, among others, is under England's control, although China is way on the opposite side of the earth — nearly 12,000 miles away by sea?"

A chorus of objections met his astonishing statements. Undisturbed, he went on:

"You are astonished? You do not think it possible? But it is true, every bit of it. It wasn't true 100 years ago, but since then a great change has come about in 'proprietorship' in the different parts of the earth. Today Great Britain controls to a greater or less degree one fourth of the territory of the whole world, and more than 400,000,000 people. One fourth of the entire population of the earth is under the British flag."

The Englishman was partly right. Great Britain has vast tracts of land all over the world, and these make up the British Empire. From Canada, Australia, India, and many other parts of the Empire she collects food, and from them her ships also carry raw materials for her factories. In return she sends out to these parts of her Empire manufactured goods and coal.

But was not the Englishman partly wrong? Can the British Empire live entirely by itself?

We shall study that matter in this chapter and the next one.

WHAT IS THE BRITISH EMPIRE?

There is a saying among Englishmen, "the sun never sets on the Union Jack." Do you know what that means? It means that no matter on what part of the earth the sun is shining there is always beneath it some land which is controlled by Great Britain. There is indeed no continent upon some part of which Great Britain has not set her flag. What centuries of fascinating history have gone into the making of this vast chain of territories!

Look at figure 46. Every shaded region on that world map is a part of the British Empire. The British Isles, as you learned in *An Introduction to American Civilization* (p. 49), are not so large as the state of New Mexico, while Texas is more than twice as large. However, Great Britain controls[1] the people living on one fourth of the earth's surface. This is the British Empire — the greatest empire in the world.

In order to know what countries make up the British Empire, find them on your world map (figure 46). These are the larger parts of the Empire:

1. British Isles
2. India
3. The Union of South Africa and other African territories
4. Canada
5. Australia and New Zealand
6. The Malay States

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[1] This "control" is not absolute. Perhaps the most interesting fact in the history of the British Empire is the increasing self-government in the various parts of the Empire and the change from "colonies" to "dominions." This is reflected in the official name of the British Empire since 1921 — "British Commonwealth of Nations." At the head of the government of the whole Empire is the king. In all political actions he is guided by the prime minister and his associates, who are responsible to the British Parliament. The members of Parliament are elected by the people of England, Scotland, Wales, and Northern Ireland, which form the "United Kingdom of Great Britain and Northern Ireland." In this book when Great Britain is referred to the United Kingdom is meant. It included all of Ireland for many years, until the Irish Free State became a self-governing dominion in 1922. Canada and Australia are almost completely free from British *control.* Watch India, where there is a real problem as to how rapidly, *for the good of India as well as the Empire,* self-government may be introduced. How does the fact that there are different races of people and different religions in India affect this problem?

There are also many islands, scattered through the seven seas, which belong to the British Empire, and many good ports taken from foreign territories.[1]

How small is Great Britain, the homeland, compared with the huge British Empire?

Let us compare the size of the chief areas of the Empire with that of the British Isles. Not one of these is as small as the mother country. Most of the provinces of Canada, of Australia, and of the African possessions, and some of those of India, are each larger than the land that controls this vast empire.

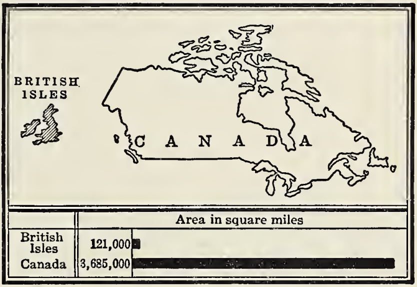

Fig. 47. Compare the area of the British Isles with that of Canada, a part of the British Empire

Not only is the British Empire huge in area, but it includes nearly one fourth of the people of the earth.

India may be considered the center of this great empire in its spread over the globe. As you continue your reading, notice some reasons why it may be so considered. Notice that India lies within that region of densely populated Asia that we learned about in Chapter I.

Great Britain, with about 43,000,000 inhabitants, controls most of India and about 247,000,000 of its inhabitants. Other populations also must be included — in Canada, Australia, the Union of South Africa, the Malay possessions, and many islands.

Why does Great Britain want to hold so much of the earth?

Many British people have given their lives on battlefields, in jungles, and on deserts to build the Empire. They have endured cold, heat, hunger, and disease for it. Why?

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[1] Since the World War the League of Nations has put some lands under the protection of European powers. Irak (Mesopotamia) in Asia and large amounts of land in Africa which used to belong to Germany are now under British care. Egypt has sometimes been called a part of the British Empire and during the World War was for a while a "protectorate." We shall notice its relations with the British Empire more definitely in Chapter VI.

There are many reasons, of course. Some did it for love of country and pride in the British Empire; some because of an adventurous spirit and the lure of thrilling adventure. Some went out to India, or Australia, or Canada because England was overcrowded and there was no land to farm; some went searching for gold, and some went to build railroads.

One of the most important reasons, however, was the *desire of Englishmen for a better living.* That desire sent thousands of Englishmen across the Atlantic to settle in North America. It sent other thousands to distant South Africa and Australia. The desire for a better and more independent life played a very important part in building the British Empire.

But the Empire grew, also, chiefly because of *the need of Englishmen for trade.* You have already seen how Great Britain became the very center of world trade. As her trade grew, her Empire grew — the two developed hand in hand. The story of the British Empire is also the story of the change from England of the manors to modern industrial Great Britain.

You have already learned most of that story. You have seen how England was the first country to use machines and engines and to adopt machine manufacturing on a large scale. You have seen how the English people left their farms and crowded into cities; how the population of the island grew; how less and less food was raised; and how more and more goods were manufactured.

That is a large part of the story of the British Empire. Trade is its keynote. The desire of people for profit in buying and selling was the chief reason why Great Britain (and later France, Germany, and other countries) built up an empire. Every region that Great Britain has controlled since 1500 has been the scene of trade.

How did Great Britain get this vast empire?

How in the world, one wonders, did such a small country gain possession of such vast stretches of land?

The thrilling history of Great Britain's empire-building could never be told in one chapter. There are many books which tell how daring Britons set out to explore new corners of the globe and claimed these for Britain. They endured great hardships and met serious perils in planting their flag in distant countries. You can read whole volumes about the wars which Great Britain has fought on land and sea to hold her hard-won possessions. These stories fill books, while we have only one chapter. So we can give you only a brief outline of what happened.

An Important Example of the Way in which Great Britain built up the British Empire: how she got Control of India

The first step: The English East India Company controlled India's trade

You know the story of the East India Company's long struggle to get the trade of India during the 1600's and to hold it during the 1700's. The story of this powerful company illustrates well the early history of empire-building.

You remember how, in spite of great difficulties, the Company survived and grew wealthy. In 1669 the head of the East India Company wrote that the Company was paying 3000 sailors on 30 ships.

> Were it not for the East India Company, [he wrote] we should be at the mercy of the Dutch traders; we should have to buy foreign linen instead of calicos that come from *our own dependencies*, and we should lose the protection secured for the country by the employment of many staunch ships and marines.

This quotation tells us that even in 1669 the East India Company not only had a powerful control over India's trade, but that it also had control over her people. Did you notice that the writer speaks of India as a "dependency"?

What India was like when the English first went there

Let us try to find out a little about the people of this country with which the English and the other Europeans were eager to trade.

India was certainly not like any European country in 1600. The English traders found life there very different from anything they knew at home. The climate was different. Crops and products were different. The people looked different, and their customs, religions, and ways of living were different. Everything seemed strange.

Find India on the map of figure 46. Note that it is a peninsula, about half the size of the United States, forming the south-central part of Asia. It is fairly centrally located between eastern Europe and China.

It lies in a very warm zone, extending from about 10° to about 30° north latitude.

Even 300 years ago India was an old and "civilized" country. Behind her stretched several thousand years of history. In ancient times, even before 3000 B.C., India had been settled by tribes from the north. These people probably came there through passes in the Himalaya Mountains.

The people of the tribes had been hill dwellers. They were much like the people who had settled around the Mediterranean — the Persians, the Greeks, the Romans, and others.

The tribes discovered two splendid river valleys in their new country,— the valley of the Ganges and the valley of the Indus. They conquered or drove away the more primitive tribes which they found there and settled down to lives of simple hunting and farming.

During the many hundreds of years that followed, other tribes came, conquered them, and settled in their place. Old generations died and new ones grew up. This story was repeated again and again. At last a new civilization developed unlike any other. It was the civilization of the India of today.

We cannot find out much about the early life of these Indians. They had not yet worked out a system of writing; so they could not leave written records. They did sing of their deeds and those of their ancestors, however. The songs were learned by children from their parents; and when those children had grown up, they in turn sang the same songs to their children.

At length two great poems grew out of the songs. Later the songs were written down. They are tales of ancient heroes and splendid deeds. Today the Indian people still sing of the deeds of these old heroes. They still revere the men who lived 4000 years ago. In their prayers they chant the musical names of the great rivers that gave life to their ancestors as they now give life to them. The Ganges, the Indus, the Brahmaputra, — all are holy rivers. The old songs and the traditions of India are woven about them.

The people were divided into classes called castes

Not until about 2000 years ago was the life of India recorded in writing. A code of laws, written about 200 B.C., tells us how people worked and lived. The population was divided into classes called *castes*. The system was very complicated at the time the code was written; so we know that it had been in use long before 200 B.C.

This caste system seems very strange to us. All people belonged to one caste or another. No person, so long as he lived, could ever change his caste. Men were obliged to marry within their caste, and their occupations were fixed by the caste into which they were born. If a man attempted to leave the caste in which he was born, he became an "outcaste," in which case his position was "less than the dust."

In the caste system a few people, called the Brahmans, came first. They were the most important people in India. A Brahman was of the priest class. He was free to marry, but his wife must be the daughter of a Brahman.

Below the Brahmans was a class which included a small number of princes and warriors.

Below this caste was that of the merchants and farmers and craftsmen. There were many more of these people than of the higher castes.

Lowest of all were the peasants, who did the hard and unpleasant work. Most of the people in India belonged to this caste.

The caste system exists today much as it did in 200 B.C.

Throughout the old India these various classes lived together in villages

Even more than the peasants of Europe, the people of India lived in little villages. Hundreds of thousands of these were scattered over India. Village life in India, however, was not at all like village life in England. The land which the villagers farmed did not belong to a lord, nor to individual peasants, but to the whole village itself. The farmers all worked together on it.

In the villages there were warriors to protect the people. Since the warriors belonged to a different caste from the farmers, they never did any farming. They had to keep themselves busy, however; so they were always at war. As long ago as 600 B.C. a part of India was divided into sixteen independent states, and the warriors of these little states fought one another constantly. But their fighting did not disturb community farming. Side by side the castes performed their different tasks.

So, for thousands of years, a strict *division of labor* was practiced in India.

The Brahmans of the village kept the temple and the school. The temple was the village center. Three fourths or more of the villagers went there every day. Children left flowers there on their way to school. After work the villagers stopped there for an hour or so of quiet thought. The village temple was also the village theater. The Brahmans often gave plays there.

The village activities were definitely fixed according to caste, and customs grew up around them. Manners were carefully studied and were very important. For example, a boy tells us of his father's homecoming. At his arrival the master sent a servant to his wife's servant with this message: "The master has returned and has washed his feet. May he enter the presence of the light of the household?" And then the wife came out, and in the cool of the evening they talked together.

The craftsmen tried to make each article a thing of special beauty

In India people strove to be poetic, and "spiritual" above all things. Even today all over India thousands of people turn daily to the rising sun and chant:

> O blossom of eastern silence, wandering upon paths dustless and untainted by the feet of man, bring thou the dawnward way, and be our advocate before the speechless God![1]

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[1] Dhan Gopal Mukerji, *Caste and Outcaste*, p. 7, published and copyright by E. P. Dutton & Co., Inc., New York, 1923; used by permission.

In the villages there were many crafts. The craftsmen worked together in the same manner as the farmers worked together on the land, and their caste was equal to that of the farmers.

The craftsmen had a great love for beauty. The making of a Cashmere shawl shows how this entered into their work. The making of a shawl took twenty days. The workers wanted every shawl to be a beautiful, delicate thing, and the making of it was a ceremony.

Before the shawl was begun the craftsmen stood together, each one holding his piece of wool. There were no directions, no printed instructions. The craftsmen all knew how to weave very well, and they worked under the direction of a master. The master craftsman carried in his imagination the picture of a beautiful pattern. He gave directions. Every worker followed his instructions. The pattern began to grow. The men chanted at their work.

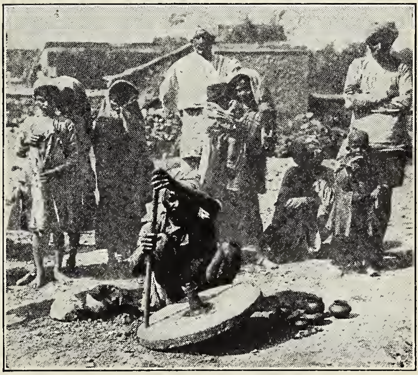

Fig. 48. If we could show a photograph made a thousand years ago of an Indian potter and his wheel, you would not see much difference between that picture and this one. Notice that no two pieces of pottery (at the right of his wheel) are exactly alike in size and shape

The master directed the making of many intricate designs of flowers, plants, and animals. He never used models or patterns, preferring to work out the pattern as he saw it in his mind.

The craftsmen continued to sing. The shawl continued to grow. Everybody worked faster and faster, deeply absorbed in his task. They wove as though in a dream, enchanted by the beauty which each was helping to create.

At last the delicate, beautiful shawl was completed. There is no other like it in the world. It is a work of art, which the craftsmen named "The True One" or "An Evening Dream."[1]

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[1] Adapted by permission from Dhan Gopal Murkerji's *Caste and Outcaste*, chap. vii, "The Cashmere Shawl," published and copyright by E. P. Dutton & Co., Inc., New York, 1923.

Some craftsmen were not so important as others; for example, the potter was one of the lowliest craftsmen in India. Nevertheless his work was to him a sort of religion, as the making of the shawl was to the shawl-makers. He prayed for inspiration to do it well. On his wheel he molded clay vessels for household use. Each piece that he turned out was the only one of its kind. He did not want to make another like it. It was something of his own, something he had created, and he named it before he sold it.

That was the way people lived in the countless villages of old India. That is much the way they live today in most of them. Except in the villages near the cities, India has changed little as the centuries have passed.

That, then, is the way the English traders of the East India Company found the Indians living when they came to their country.

The second step: making India part of the British Empire — The English East India Company ruled the Indians and tried to make them live according to the British way

Brief as this sketch of life in India has been, you have doubtless seen that it is not at all like the British way of living. You cannot imagine an Indian craftsman wanting to go to sea to build up a world trade for India. You cannot imagine him eager to leave his village to go to a city and work in a factory. You feel sure that the shawl-maker would not enjoy making his shawl on a machine. He would hardly be able to enchant himself with his vision of beauty in the midst of clacking looms. He could not even chant as he worked, for the roar of turning wheels would drown his voice.

The potter would not want to go into a factory. He could not turn out individual pieces of work. He would hardly care to fondle lovingly each new machine-made vessel of clay. He could not give it a special name, for it would be just like every other vessel.

Is it not difficult to imagine the warriors or the Brahmans taking up machine industry? It would be necessary for them to change the way of life which had been set by thousands of years of history. Their lives were laid out for them at birth, and they knew only one system of organizing their work and of living together — the caste system.

Then came the British, who tried to change them in spite of themselves.

When the traders of the English East India Company went to India, they went to buy India's products. They did not know how the people lived. The Indian people were not eager to show these strangers what they thought or how they lived. Englishmen were traders, and their coming was regarded as merely temporary.

Years, even tens of years, went by, and British traders of the East India Company were still calling at India's ports. Then about 1689 the English king granted the Company a charter, giving new rights to the traders. They could acquire territory, coin money, and command fortresses and troops. They could make war and peace and form alliances. The English East India Company, you see, was beginning to *govern* India.

Although the British traders had been in India for a long time, they really did not understand the Indians. Nor did the people of India understand the British traders. The British did not appreciate how unbreakable were the class divisions in India's society. They failed to recognize that the slightest change in the caste system would mean a serious upheaval to the people of India.

Nevertheless the British governors of the Company honestly thought that the British way of living was better than that of the Indians. So, after 1800, they increasingly made changes that disturbed the Indian people very much.

For example, they changed the way of owning and farming the land.

In 1816 the English East India Company divided some of the village land equally among the inhabitants. Every person had a small plot to cultivate. This upset the whole scheme of caste. The farming caste could no longer do the farming for the whole village. Although the people of other castes knew nothing whatever of farming, there they were with small plots of land, expected to raise their own food. The farmers, who had always farmed large plots of land with other farmers, found themselves each with only a small plot.

Things were in a bad state. Some of the people sold their farms to others who were more prosperous. Others tried to farm, but were not able to make a living. They fell into debt or hired themselves out to other farmers.

The whole caste system was turned topsy-turvy.

The Indians had always used the caste system, for it seemed to them a good practical division of labor; so they resented this foreign interference very much. They had been living in their villages and within their castes for thousands of years. Now their lives were quite uprooted. They were no wealthier than they had been. Their living conditions had not improved. They could not understand what the English hoped to accomplish by this new plan.

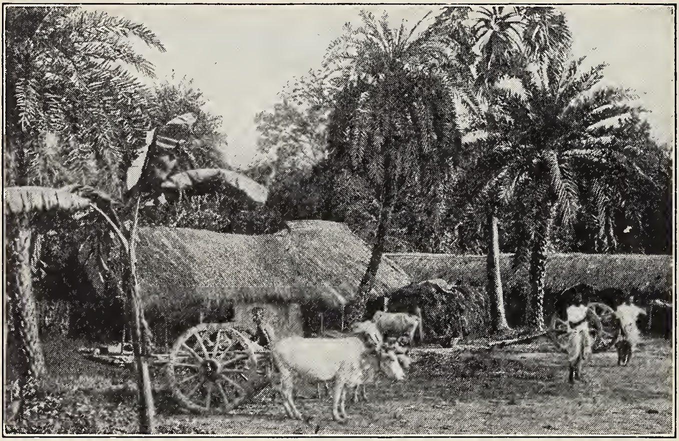

FIG. 49. A farmhouse (left) and barn (right) in India today. The muscles of human beings and animals still do all the work on most of India's farms

The division of the land which the English made would have delighted peasants in England during manorial days. They were eager to farm plots of land of their own, instead of farming the lord's land. But it did not please the people of India who had no desire to farm their own land.

As things became more and more tangled, the people in India began to object still more to British management.

The third step: The East India Company chose a governor to rule

Throughout the 1700's and 1800's the East India Company had one difficulty after another with the people of India.

To keep the people quiet, the officials of the company employed native warriors to subdue the rebellious tribes. When one group of native people stirred up trouble, the company hired another group to put down the rebellion. Sometimes the hired soldiers refused to fight, and then new troops had to be hired. There were continual rebellions, and the Company was kept busy hiring troops to quiet the uprisings.

The governors of the Company finally thought that in order to keep peace they would have to establish some sort of ruling power. So they chose an Englishman to be governor-general of a large number of Indian states. The governor-general had many British assistants. At that time the parts of India which the English governed were scattered, and there were independent states lying between the states under British control. By bribes and wars the governor-general finally secured control over most of this land, and a large portion of India was brought together and made into British territory. *It was still ruled, even in the early 1800's, however, by the East India Company and not by the British government.*

Of course the rest of India fought this move, and even the so-called British portion of India was restless. There was constant trouble. Again and again the Company was forced to call for troops from the home government in Great Britain. People in England began to say that the British government must take control of the part of India that was in the Company's hands. They thought that government rule instead of Company rule would put an end to most of the trouble.

The mutiny of 1857 was another example of British difficulties in India

Many of the old warrior caste of India came under the control of the Company's governor-general. Frequently these warriors were ordered to fight under British leaders against warriors from other states. This caused much ill feeling. It was one thing for a soldier to fight for his own village, but decidedly another thing to fight against his own people for the English East India Company. The native soldiers resented very much having to fight for foreigners. There were mutinies among them from time to time, and in 1857 there was a widespread uprising throughout India.

There were many incidents of misunderstanding between Britons and Indians of the Hindu religion which led up to the trouble. One incident, however, set the match to the explosion — an incident which shows very well the wide difference between European and Indian customs and ways of thinking. This was the resentment of the Hindu soldiers at having to bite the wax covering off their cartridges.

As we know, in certain Christian churches even today, it is a rule to refrain from eating meat on certain days and at certain times in the year. A Christian who believed in his church would never think of breaking that rule. The Hindus have similar rules. For example, a Hindu is forbidden to taste animal flesh and fats. To do so is to be "unclean" or "unholy." It were better to lash the body with many whips or to cut the skin with many knives than to taste of these animals.

Now the English people do not think as the Indians do about such things. They never stop to think whether they are tasting animal fat or vegetable fat, and it makes little difference to them.

The English military authorities had introduced into the Indian army a new kind of rifle. The bullets of this rifle were made with a protective covering of wax. To remove the covering the soldiers had to bite part of the wax with their teeth. Of course the soldiers from Great Britain did it without objecting. For some time the Indian soldiers too did it without objecting. They supposed that the wax was made from a vegetable fat. In 1857 a rumor spread that the wax was made from animal fat! The Indians were suddenly fearful that they had been tasting the fat of pigs or cows!

This was too much for a soldier of India to bear. He would rather have been killed than go directly against what his religion taught him. So the Indian troops and the Indian people rebelled in such numbers that the East India Company was quite unable to manage them. The rebellion grew to such proportions that it threatened the English control of India.

Of course that one incident alone could not have caused a whole people to break out in revolt. But ill feeling against the British had been smoldering for a long, long time. It needed only one violent happening to fan it into a blaze. Many minor ones had occurred, and small groups of soldiers had mutinied again and again. But when the Indian people came to believe that their religious customs were being interfered with, that was cause enough for a real rebellion.

The revolt spread throughout many districts and soon got beyond the control of the East India Company's officials. Then the British government stepped in. Large numbers of troops were sent from Great Britain to put down the uprising.

The fourth step: The British government took complete control of India

As a result of this serious revolt, the British government forced the East India Company to give up its rights to govern India. A new governor-general and other officials representing the British crown were sent to rule the various parts of the country.

The British government had been preparing gradually for this move. In the preceding 200 years it had been slowly adding islands and bits of land along the coast to its Indian possessions. Even before 1800 much Indian territory was governed officially from London. After 1800 new bits were constantly being added to the growing British Empire.

Then after the rebellion of 1857 the British government assumed entire control. A larger military force was sent out, and more Indian troops were organized to maintain order. Thousands of British officials left England to rule the various states and districts.

Finally, in 1877, Queen Victoria of England was officially proclaimed Empress of India. Great Britain added hundreds of millions of people and a large territory to her Empire, and India became her most valuable possession.

India Today

How can India's many people live in such a small area?

In British India there are more than 247,000,000 people living within about 1,000,000 square miles of territory. In the independent Indian states live 72,000,000 more. Nearly 20 per cent of the people on earth live on a little over 3 per cent of its surface. In a territory not much more than half as large as the United States live almost three times as many people. India is five times as crowded as our country.

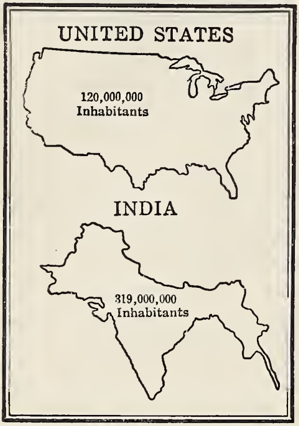

Fig. 50. India, a little more than half the size of the United States, has a population nearly three times as great

Why do so many people live in India? Is it because of manufacturing and trade, as in the United States and England? Do the people depend upon the outside world for food?

Not at all. The people of India are living in hundreds of thousands of little farming villages. There are a few large cities — Calcutta and Bombay with more than 1,000,000 people each, Madras with more than 500,000, and a few others. But these cities are not really manufacturing centers, although a little machine manufacturing is now being carried on in them. They are old trading cities and centers of government.

India's location in a warm climate and her fertile soil help to account for her large population

No, it is not coal, iron, engines, and machine manufacturing that account for the tremendous population of India, as they do for the population of the industrial countries of Great Britain and the United States.

More than anything else, a climate and a soil favorable for the growing of rice account for it.

The country is located between 10° and 30° north latitude. The climate of a large portion of India is warm and damp, excellent for rice-growing. One third of the farming land of India is sown with rice.

Wherever rice can be grown abundantly, many people can live. That fact is clearly brought out on the world-population map of figure 1. Note that China and India are black with people. Both are rice-growing regions. We shall study other rice-growing regions more carefully in later chapters.

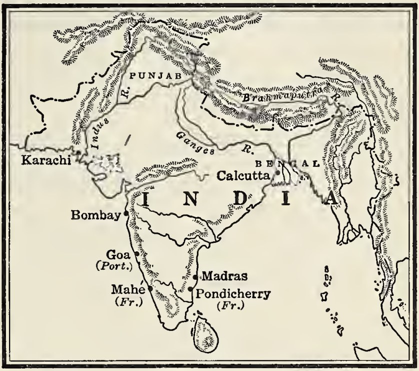

FIG. 51. India is well supplied with rivers

Rice is not India's only important crop, however. Every year she raises great quantities of wheat. Most of this is not used by the people of India, but is shipped to Great Britain and to other industrial nations.

The poverty of the peasants

Nearly three fourths of the people of India are peasants living in little villages somewhat as their ancestors have lived for thousands of years. They are crowded together in the fertile valleys of the Ganges, Indus, and Brahmaputra rivers. The peasants in many of the regions get only a meager existence out of the soil, barely enough to eat. There are so many mouths to be fed that even huge quantities of rice are not sufficient. The peasants live from day to day, from hand to mouth, hoping for a better day tomorrow. A scholar of India who wrote about the lives of his people said:

> The Indian peasant is "the most frugal in the world." He lives in a thatched or tiled hut with walls of mud or plaited straw. His wants are few, and they are supplied by the local artisans and menials, whom he sometimes pays with a share of the harvest. . . . Thanks to our warm climate, our needs for clothing are few. . . . The Indian standard of com-

fort is very low . . . . As a European observer has remarked, "Why the Indians live is the question ever forcing itself for answer. It is not that they may enjoy food; all that they eat is some coarse grain. . . . It is not for pleasures; for their enjoyment is a religious pilgrimage." . . . It is impossible for them to buy any luxury, homemade or foreign, except the cheapest — and that, too, they can buy only when brought to their doors.[1]

Another Indian student confirms the foregoing description:

Even in normal times Indian villages swarm with the hungry. When I was in boarding school as a boy, my roommate and I cooked our own food. The poor in the neighborhood, knowing that the school housed a hundred boys who had enough to eat, used to come in procession one after another begging us for food. A morsel here, and a morsel there, and soon we had given away all that we had prepared for ourselves and had to cook more or go unfed.[2]

How does the standard of living of India compare with that of the United States?

From these short descriptions of how the poor people of India live, we can draw some comparisons. How does their way of living compare with that of the people of the United States? Is the Indian standard of living as "high" as that of the workers of Great Britain?

Have many of the people of India good and fashionable clothing? Have they radios and automobiles? Have they money to spend on amusements and luxuries as we do? Have they electric lights, modern plumbing, and running water in their homes? Is their dinner table "a League of Nations," as we described the dinner table of Americans and of Englishmen?

No, indeed; their standard of living is very different from ours. The people of India cannot afford the comforts and luxuries which we have grown to regard almost as necessities. Perhaps some of those things they would not want even if they could buy them. To have sufficient rice every day is the most that thousands of families can ever expect.

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[1] Adapted from Jadunath Sarkar's *Economics of British India*, pp. 145–146. Longmans, Green & Co., New York, 1920.

[2] Daniel Swamidoss, "A Way Out for Rural India," *Asia* (New York), March, 1923, p. 198.

In the Rural Districts of India Handicrafts and Trade are carried on as well as Farming

Life in most of the villages of India is as simple as that of Europe in the Middle Ages. Every community has its own weavers, its blacksmiths, its potters, and its braziers.

The Indian peasants rarely ever leave their little villages. Hence peddlers go about from village to village with their small stock of goods loaded on an unskilled laborer, called a coolie, or on a pack animal.

In the large villages there are market places. The largest villages have a few permanent shops. In the very smallest ones there may be a farmer who keeps a tiny store in his house.

India is being changed slowly by the Europeans from an Agricultural to an Industrial Country

The old India is gradually beginning to disappear. In many places factories have been built by British manufacturers. Woolen

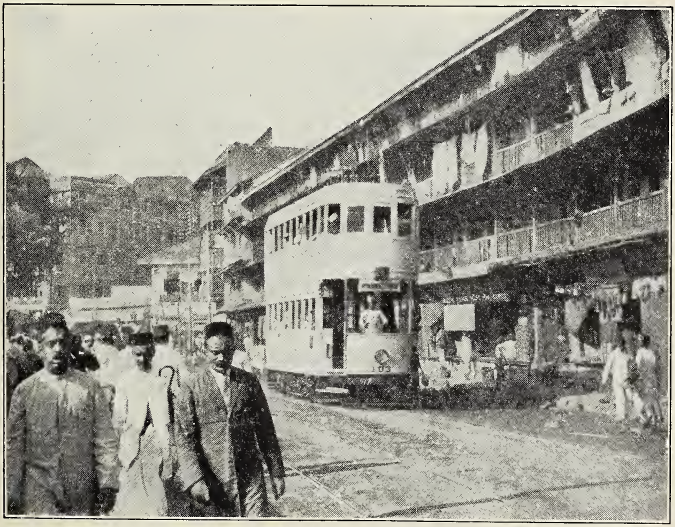

Fig. 52. A scene in Bombay. What is there in this picture that shows the influence of European methods upon India?

mills, silk mills, cotton mills, tanneries, and paper factories appear from time to time. In Burma the British are laying out huge rubber plantations. In the chief ports modern docks have been built, and ocean transportation is increasing. Indian port cities are beginning to resemble those of Europe and America.

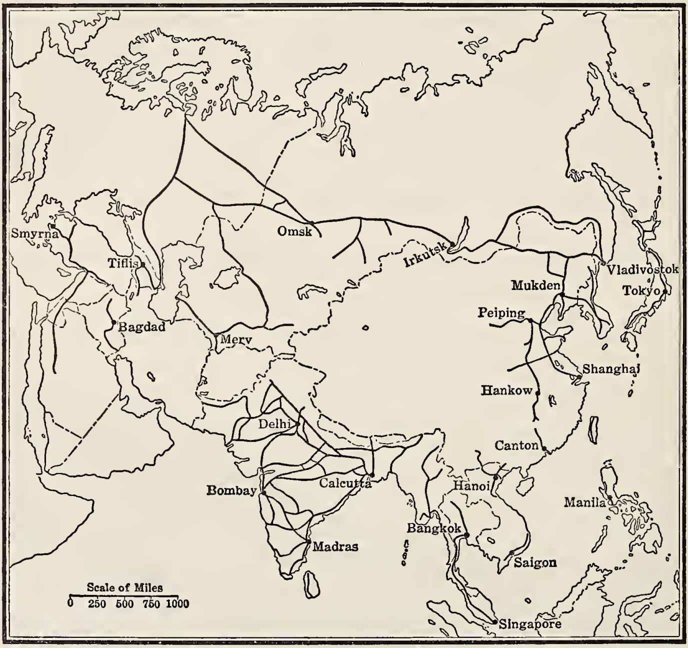
Smyrna
Tiflis
Omsk
Irkutsk
Vladivostok
Mukden
Tokyo
Peiping
Bagdad
Merv
Shanghai
Hankow
Delhi
Canton
Hanoi
Bombay
Calcutta
Manila
Bangkok
Madras
Saigon
Scale of Miles
0 250 500 750 1000
Singapore

FIG. 53. As India's trade has developed, her miles of railway have increased. Today she is better supplied with railways than are other countries of Asia

Even during the nineteenth century the village peddlers were selling British cloth in place of the native homespun. Throughout India the native weavers are losing their customers because of the new machine-made goods. The village metalsmith too is losing much of his business. Many British machine-made tools, implements, and household utensils are replacing the handmade products, because machine-made goods can be sold for a much lower price. Indian handicraft is slowly dying.

Transportation throughout India is changing steadily too. Main railroad trunk lines have begun to form a network over India, as the map of figure 53 shows. British capital has built these railroads. Today there are many more miles of railroad in India than in all the rest of Asia. It is interesting to note that in India there are about 20,000 more miles of railroad than in England.

The railroads carry British manufactured goods into the interior of the country. They help the industrialization of India, for with dependable and easy transportation more goods can be shipped.

INDIA IS A VALUABLE MARKET FOR ENGLAND'S MANUFACTURED GOODS

British merchants carry on a tremendous trade with the Indian people—more than $400,000,000 a year. This is more than Great Britain sells to any other country—to the United States, to Germany, or to France. It is nearly three times as large as the exports to Canada. Although the Indian people are very poor, there are a great many of them—about six times as many as the people of Great Britain. Hence, even though any one village purchases only a small amount of goods, the total amount sold to India is very large, as figure 54 shows.

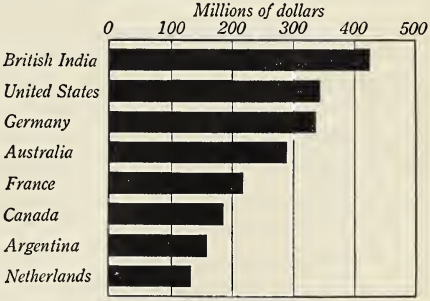

FIG. 54. This graph shows Great Britain's best customers and the amount of goods they buy of her. Note particularly that India buys more from Great Britain than does any other country. However, the United States buys almost as much

In the cities of India British machinery, wagons, automobiles, trucks, and steam engines are being sold in large quantities. There is a small class of very wealthy people living in the cities and towns. These people live in luxury and splendor and are adopting European standards of living and buying many products from Great Britain.

So Great Britain wishes to keep India in the British Empire and to control her trade.

India supplies Great Britain with Needed Food and Raw Materials

From India Great Britain buys large quantities of food and raw materials, which are necessary for her existence. India sends huge shipments of raw cotton to feed the whirring mills of England's textile cities. She sends wheat, tea, and rice in large amounts, and jute, wool, and leather.

Thus English business men have profited greatly from India, and English industries and their workers depend much upon Indian products and Indian markets. From the point of view of trade India is by far the most valuable unit in the British Empire.

This, then, is the Way Great Britain made India a Part of her Empire

Our story of Great Britain's taking of India is very brief, but we lack space to tell more of it. Let us sum up the chief points.

You have seen how it all grew out of the desire of Englishmen for trade with a densely populated country. Three hundred years ago it began in a small way. English traders exploring the Far East saw the advantages of buying the spices, metals, cloth, etc. of the Indian people and selling them in Great Britain. Then the East India Company struggled to get ships through to India and back safely to England with their precious cargoes. Many English people believed that great profits were to be made, and so invested their wealth in the Company.

After many discouragements the East India Company prospered. Gradually both the Company and the British government took control of bits of land here and there in India. Steadily both began to govern more and more of the Indian people. Tribes were subdued, and the East India Company set up its own government. A governor-general with many officials and an army of Indian troops under British officers tried to keep order.

Trade kept on growing, and, in the later 1800's especially, the English people came to depend very much on the cotton and wheat of India, as well as on other materials and foods. They also depended upon selling their own manufactures to these millions of people; India became a profitable market for the things made in far-off England.

But the people did not have the same customs or the same religion. Ways of living were very different. In some instances the English rulers tried to make the Indians live according to European ways, and the Indians rebelled against it. Finally the East India Company could not govern the Indians, and the British government officially made it a part of the British Empire.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

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CHAPTER VI

THE BRITISH EMPIRE: POSSESSIONS IN THE MEDITERRANEAN AND AFRICA

Turn back to figure 46. How the British Empire stretches around the entire earth! Three hundred years and more of history have gone into the making of it.

India has the largest population of any one part of the Empire, but India is only a small portion of the whole. Other parts are much larger in land area. Compare the size of Canada, Australia, and the African possessions with India. How many times larger than India is Canada? Australia? the British possessions in Africa?

The annexing of these other colonies to the Empire came about in quite different ways. In the case of India, England had to conquer and govern an old, well-developed civilization. Most of Canada and all of Australia and South Africa were wilderness. When Englishmen first went to these regions, they were for the most part unknown to Europeans and inhabited mainly by primitive, half-civilized natives. The land had to be explored and settled.

Daring Britons in search of homes, fortunes, or adventure went out to each region and built up a British civilization there. They took with them the English language, English ways of dress, English laws and customs and ways of thinking. They tried to live in their new homes just as they had in Great Britain.

You know a little of how they did that in North America in the seventeenth and eighteenth centuries, establishing the thirteen colonies, which afterwards became the United States of America. At the same time they were settling in the southern and eastern parts of Canada. There they cleared the wilderness, cultivated the soil, and built their homesteads. Some towns and cities grew, and Canada has become a dominion of more than 9,500,000 people.

Many years later, in the late eighteenth and early nineteenth centuries, other British people were moving halfway around the world to settle the coast lands of Australia and New Zealand. Still later in the nineteenth century British communities were beginning to appear in the interior of South Africa. All these new lands grew into rich colonies.

The new British homes built in the colonies were much like homes in Great Britain. The first colonists that went out were simply transplanted Britons. They retained their old customs, their language, their dress, and their ways of thinking.

Today, after many years of absence from the mother country, or even though they may never have visited Britain, the people of Canada, Australia, South Africa, and other British regions have an attachment for their fellow Britons and for their ancestral homeland. In feeling and in organization the Empire may be considered a family of British nations.

"Daughter am I in my mother's house,
But mistress in my own."

Who is supposed to be speaking in these lines from Kipling? What does she mean?

There are many interesting stories told about the strange kinds of life which Englishmen found when they entered the new continents. The stories of their struggles to fit themselves into their new surroundings are exciting. There were often unfriendly natives, wild beasts, or inhospitable nature to conquer.

We can merely outline briefly the manner in which the other chief parts of the Empire were claimed by the British. The story of each possession is new and different from that of India, but the general plan is much the same.

We have too little space in this book to consider all the parts of the British Empire. We shall, therefore, take up only the possessions in the region of the Mediterranean Sea and the vast possessions in Africa.[1] India we have already studied.

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[1] It would be well for you to study Canada, Australia, and the possessions of Great Britain in the Far East by means of committees. A committee of several pupils could make a report to the class on each one of these important parts of the Empire.

THE BRITISH EMPIRE INCLUDES IMPORTANT POSSESSIONS IN THE MEDITERRANEAN REGION AND IN AFRICA

Great Britain took lands in the Mediterranean region

For more than 200 years Great Britain has taken land in and around the Mediterranean Sea. One by one she has added to her Empire the following:

1713	The fortress of Gibraltar, at the western entrance to the Mediterranean Sea.
1814	The island of Malta.
1839	Aden, which stands on the north shore of the exit from the Red Sea.
1875	Chief control of the Suez Canal.
1878	The island of Cyprus.
1882	Occupation of Egypt (now independent except for that part called the Anglo-Egyptian Sudan).
1884	British Somaliland, opposite Aden on the Red Sea.

Great Britain's struggle to secure these lands was a long one; and while these places are unimportant in size, it was necessary that Great Britain control them.

Why did Great Britain want these lands?

There were two reasons: (1) to help her to get much of the trade in the rich Mediterranean region, (2) to protect the sea path of her ships to India. The second reason is probably the more important.

The land around the Mediterranean Sea has been an important trading region for thousands of years. Here the ships of Egypt, Phœnicia, Crete, Greece, and Rome carried the valuable goods of ancient days. Here, a thousand years later, the merchants of Venice, Genoa, and Bruges carried their goods to Alexandria to exchange with the merchants of Asia. On the shores of the Mediterranean developed the great empires of Egypt, Greece, Rome, and the Mohammedan Turks.

After the Crusades and the European discovery of eastern Asia the Mediterranean became more than ever the trading crossroads between the East and the West. Even today it is still a vast region of trade. Nearly 200,000,000 people live around it and depend upon its shipping for trade with the outside world. Note (figure 55) the countries that border on it: France, Spain, Italy, — all three with colonies in Africa, — Greece, Yugoslavia, Turkey, Syria, Palestine, and Egypt.

Beyond these countries, and also depending on the trade of the Mediterranean, are other European peoples. Note, for example, how Russia depends on the Mediterranean Sea to ship goods by water to other parts of the world. All the northern European countries also want to share in this great trade.

Great Britain's first reason, therefore, for taking land in the Mediterranean was the desire to trade with the people who live there. But there was a second and an even more important reason, namely, to protect her sea path to India.

England holds the two openings to the Mediterranean Sea — Gibraltar and the Suez Canal

On the map of figure 55 the Mediterranean looks almost like a huge lake, over 2000 miles long and from 300 to 500 miles wide. There is land on all sides of it. It would be an inland sea were it not for the two small openings. One is at the west leading into the Atlantic. There, at the southern tip of Spain, stands a great rock, Gibraltar, built by nature as though to guard the narrow channel. Probably there is no stronger fortress in the world than that on Gibraltar. Its guns could keep all ships from passing into and out of the Mediterranean.

Great Britain took Gibraltar in 1713, fortified it, and still holds it today. This fortress, together with the British navy, practically gave Great Britain control of the passage of the Strait of Gibraltar, thus protecting her trade in the Mediterranean region. Today it protects also her direct route to India.

At the southeastern end of the Mediterranean is another gateway for ships — the Suez Canal. This leads to the Red Sea and so to the Indian Ocean. Until the Suez Canal was dug, European ships had to sail all the way around southern Africa to reach the Indian Ocean. The route was long and dangerous, but for many years it was the best route for British ships.

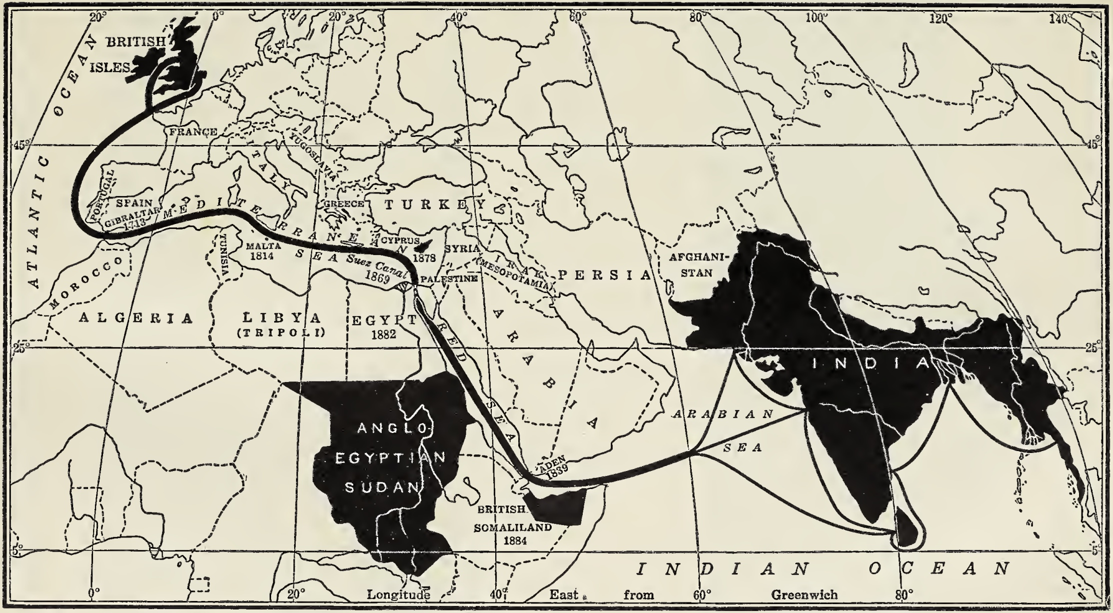
BRITISH ISLES
FRANCE
PORTUGAL
SPAIN
GIBRALTAR 1713
ITALY
YUGOSLAVIA
GREECE
TURKEY
CYPRUS 1878
SYRIA
PALESTINE
IRAK (MESOPOTAMIA)
PERSIA
AFGHANISTAN
INDIA
ATLANTIC OCEAN
MEDITERRANEAN SEA
MALTA 1814
Suez Canal 1869
MOROCCO
ALGERIA
TUNISIA
LIBYA (TRIPOLI)
EGYPT 1882
ANGLO-EGYPTIAN SUDAN
RED SEA
ARABIA
ADEN 1839
BRITISH SOMALILAND 1884
ARABIAN SEA
INDIAN OCEAN
20°
0°
20°
40°
60°
80°
100°
120°
140°
45°
25°
5°
Longitude East from Greenwich

FIG. 55. British possessions along the trade route from Great Britain to India

British merchants, however, hoped that an easier way might be found. Finally, in 1869, a canal through the Isthmus of Suez was completed by a French company. This was not a new idea. Traders had long dreamed of it. But until 1869 no nation had succeeded in making the dream come true.

The new canal cut in two the narrow strip of land connecting Africa and Asia. The opening of this passage shortened the voyage between European ports and the Far East by about 5000 miles. The possession of the Suez Canal, therefore, became of the greatest importance to Great Britain. In 1875 her government secured control of the stock of the company which built it, and *Great Britain became mistress of both mouths of the Mediterranean* — the fortress of Gibraltar on the west, and the Suez Canal on the east.

Other European trading companies demanded of Great Britain that the canal remain open to the use of ships of all nations. So in 1888 several countries signed an agreement stating that the canal should "always be free and open in times of war as in times of peace to every vessel of commerce or of war, without distinction of flag." By gaining control of it, however, Great Britain made sure that no other country could close this convenient passage to India.

To protect her sea path to India, Great Britain occupied Egypt and other Mediterranean lands also

After 1875 Great Britain thought that if she were to control the Suez Canal she must control Egypt too, as the canal was dug through land which belonged to Egypt. Moreover, there was danger that some other foreign power might get control of Egypt and so interfere with this shortened route to India. So in 1882 a British army occupied Egypt. The Egyptians resisted the invasion; but they were weak, and Britain was strong. In the end the Egyptians submitted.

There is not enough space in this book to give a good description of Egypt, but we need at least a brief glimpse of life there. Egypt had a powerful river-valley civilization when India was still young and when Europe was the home of wandering barbarian tribes. Many centuries ago, however, Egypt ceased to play an active part in the world. It had become a land of farmers,

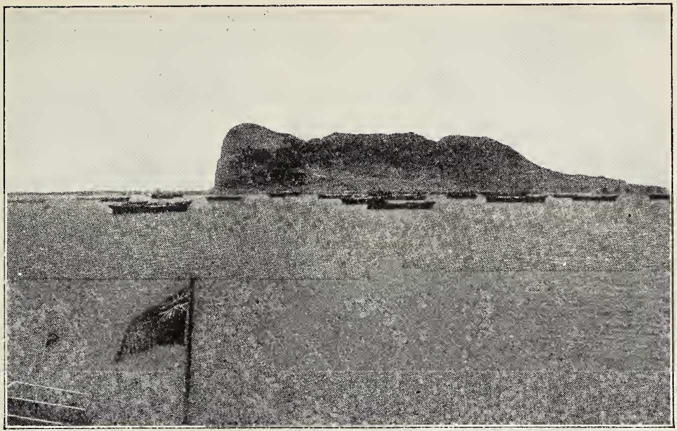

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FIG. 56. Gibraltar stands like a sentinel guarding one gate into the Mediterranean for Great Britain

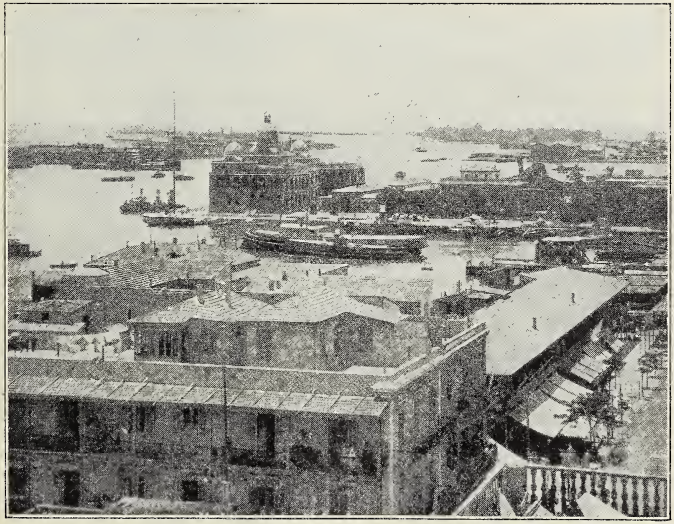

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FIG. 57. Port Said, the entrance to the Suez Canal, the southeastern opening of the Mediterranean. This artificial waterway shortened the route from Europe to the Far East by 5000 miles. Great Britain gained control of it in 1875

scattered along the Nile River. Today it is the home of millions of people, most of whom raise wheat and cotton.

Although Egypt was not a rich country, Great Britain saw advantages in holding it. In addition to containing the Suez Canal, Egypt raised large crops of wheat and cotton — two products needed by the British people. In the third place, the Egyptians were fairly good customers of British manufactures. Finally, business men in Britain thought they could make profitable investments in Egypt. So, for these four reasons, many British people wanted to bring Egypt into their Empire. During the time of the British occupation, 1882–1922, Egypt proved valuable for British business interests. More than $400,000,000 in British capital is invested there in railroads, banks, and factories.

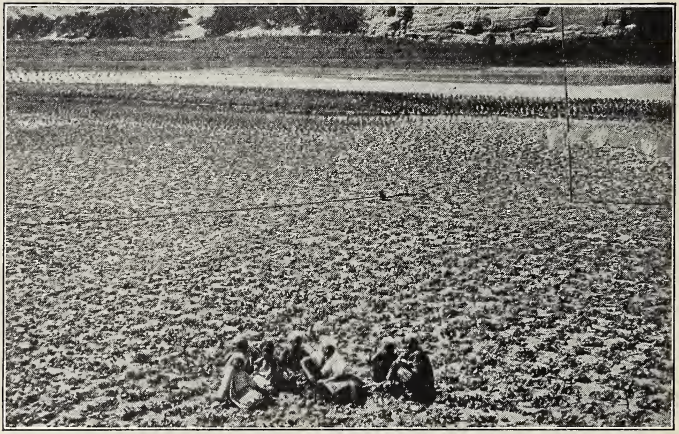
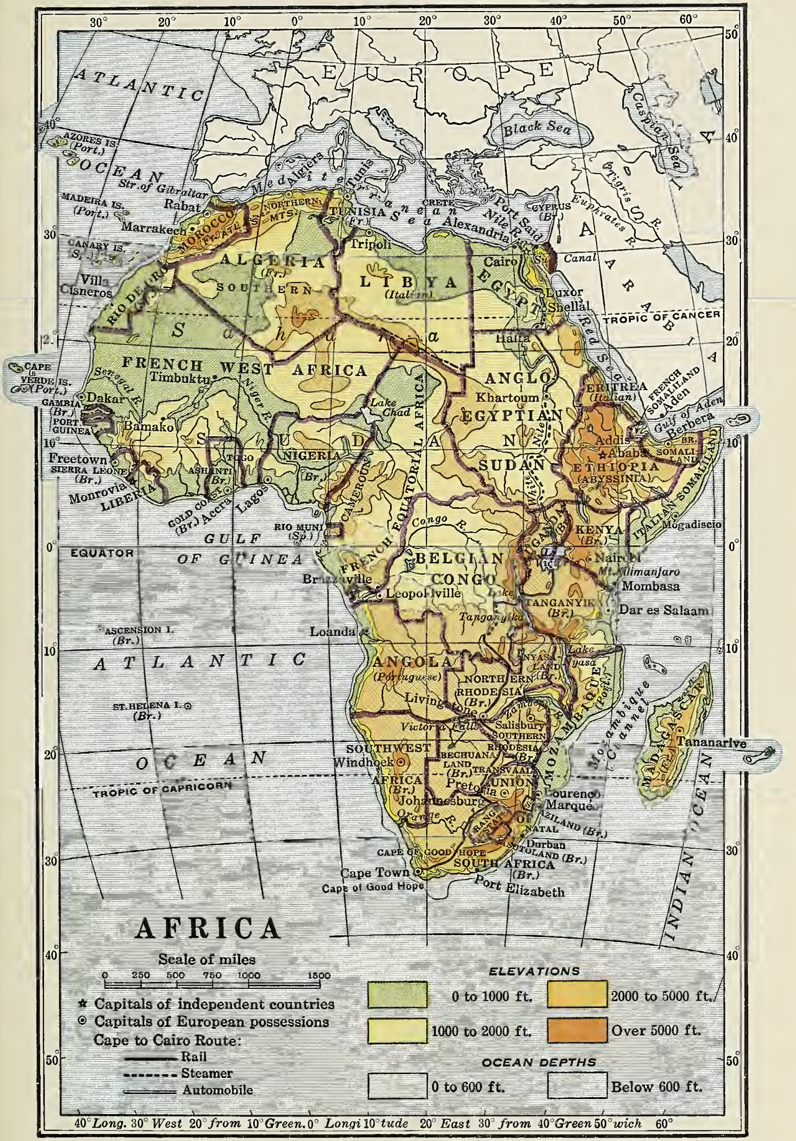


Fig. 58. Egypt, like India, supplies Great Britain with wheat and cotton. Farms made fertile by irrigation lie along the banks of the Nile, and farmers work with implements not much unlike those their ancient ancestors used

In 1922 Great Britain recognized the independence of Egypt. However, it is generally agreed that she cannot permit her routes to India or to the Anglo-Egyptian Sudan to be interfered with. Although England does not possess Egypt today, during the 40 years she controlled it she built up a flourishing trade. Even now Egypt buys more than twice as many goods from her and sells to her more than three times as much as to any other country.


AFRICA
Scale of miles
0 250 500 750 1000 1500
★ Capitals of independent countries
⊙ Capitals of European possessions
Cape to Cairo Route:
Rail
Steamer
Automobile
ELEVATIONS
0 to 1000 ft.
1000 to 2000 ft.
2000 to 5000 ft.
Over 5000 ft.
OCEAN DEPTHS
0 to 600 ft.
Below 600 ft.
40° Long. 30° West 20° from 10° Green. 0° Longi 10° tude 20° East 30° from 40° Green 50° wich 60°
EUROPE
ATLANTIC OCEAN
AZORES IS. (Port.)
MADEIRA IS. (Port.)
CANARY IS. (Sp.)
CAPE VERDE IS. (Port.)
ASCENSION I. (Br.)
ST. HELENA I. (Br.)
ATLANTIC OCEAN
GULF OF GUINEA
EQUATOR
TROPIC OF CANCER
TROPIC OF CAPRICORN
INDIAN OCEAN
Mediterranean Sea
Black Sea
Caspian Sea
Str. of Gibraltar
Rabat
Marrakech
MOROCCO (Fr.)
ATLAS MTS.
NORTHERN MTS.
Algiers
Tunis
TUNISIA (Fr.)
Tripoli
CRETE
CYPRUS (Br.)
Alexandria
Port Said
Nile R.
Suez Canal
Tigris R.
Euphrates R.
ARABIA
Villa Cisneros
RIO DE ORO
ALGERIA (Fr.)
SOUTHERN
LIBYA (Italian)
Cairo
EGYPT
Luxor
Shellal
Red Sea
Halfa
Sahara
FRENCH WEST AFRICA
Timbuktu
Senegal R.
Niger R.
Dakar
GAMBIA (Br.)
PORT. GUINEA
Bamako
Sudan
Freetown
SIERRA LEONE (Br.)
Monrovia
LIBERIA
TOGO
ASHANTI (Br.)
GOLD COAST (Br.)
Accra
Lagos
NIGERIA (Br.)
Lake Chad
FRENCH EQUATORIAL AFRICA
CAMEROUN
RIO MUNI (Sp.)
ANGLO EGYPTIAN SUDAN
Khartoum
White Nile
ERITREA (Italian)
FRENCH SOMALILAND
Aden
Gulf of Aden
Berbera
BR. SOMALI-LAND
Addis Ababa
ETHIOPIA (ABYSSINIA)
ITALIAN SOMALILAND
Mogadiscio
UGANDA (Br.)
KENYA (Br.)
Nairobi
Mt. Kilimanjaro
Mombasa
Lake Victoria
Congo R.
BELGIAN CONGO
FRENCH
Brazzaville
Leopoldville
Lake Tanganyika
TANGANYIKA (Br.)
Dar es Salaam
Loanda
ANGOLA (Portuguese)
NORTHERN RHODESIA (Br.)
NYASALAND (Br.)
Lake Nyasa
MOZAMBIQUE (Port.)
Mozambique Channel
MADAGASCAR (Fr.)
Tananarive
Livingstone
Zambezi R.
Victoria Falls
Salisbury
SOUTHERN RHODESIA (Br.)
SOUTHWEST AFRICA (Br.)
Windhoek
BECHUANALAND (Br.)
TRANSVAAL
Pretoria
UNION OF
Johannesburg
Lourenco Marques
SWAZILAND (Br.)
Orange R.
ORANGE FREE STATE
NATAL
Durban
BASUTOLAND (Br.)
CAPE OF GOOD HOPE
SOUTH AFRICA (Br.)
Cape Town
Cape of Good Hope
Port Elizabeth
30° 20° 10° 0° 10° 20° 30° 40° 50° 60°
50° 40° 30° 20° 10° 0° 10° 20° 30° 40° 50°

GREAT BRITAIN'S EMPIRE ALSO INCLUDES VAST POSSESSIONS IN CENTRAL AND SOUTHERN AFRICA

The British possessions which we have considered thus far are tremendous in size and population. But we have not mentioned all Great Britain's possessions yet. There is another vast region which was added to the Empire late in the 1800's — huge tracts of land in central and southern Africa (see figure 59).

Great Britain is not the only European country which owns land in Africa. France owns about one third of the continent. Belgium controls a vast central colony. Italy and Portugal have colonies there. Before the World War Germany had large ones. Almost the entire continent has been parceled out among European countries. In the next few chapters we shall learn more about how the land was divided, and which nations did it.

Africa is a land marvelously rich in resources

Africa was long called "the dark continent." It was well named, for until the 1800's its great interior was almost unknown to Europeans. Dense jungles, wild beasts, deserts, and black savages offered a terrifying barrier to white men. It was an unknown land full of sickness and death for many of the Europeans who entered it.

In the later 1800's, however, a few white men did succeed in overcoming the dangers of Africa. What a rich harvest they brought back — ivory, precious woods, gems, and rubber. They reported the discovery of great deposits of copper, tin, gold, and silver.

After 1880 more and more white men risked the dangers of Africa, and many of them became rich. Englishmen, Belgians, Frenchmen, and Germans went into Africa and staked out farms and mines or organized rubber plantations. Before 1900 coffee, cotton, palm trees, cane sugar, bananas, and tobacco were being grown by Europeans in the warm African climate and shipped to the other continents to be sold.

Britons, of course, were among the first white men to explore Africa and to develop trade there. Empire-building was becoming the dream of many adventurous Englishmen, and the dark continent of Africa attracted them. They had entered Egypt and the Anglo-Egyptian Sudan.

You have learned that Egypt became independent. The Anglo-Egyptian Sudan, however, is still a part of the British Empire.

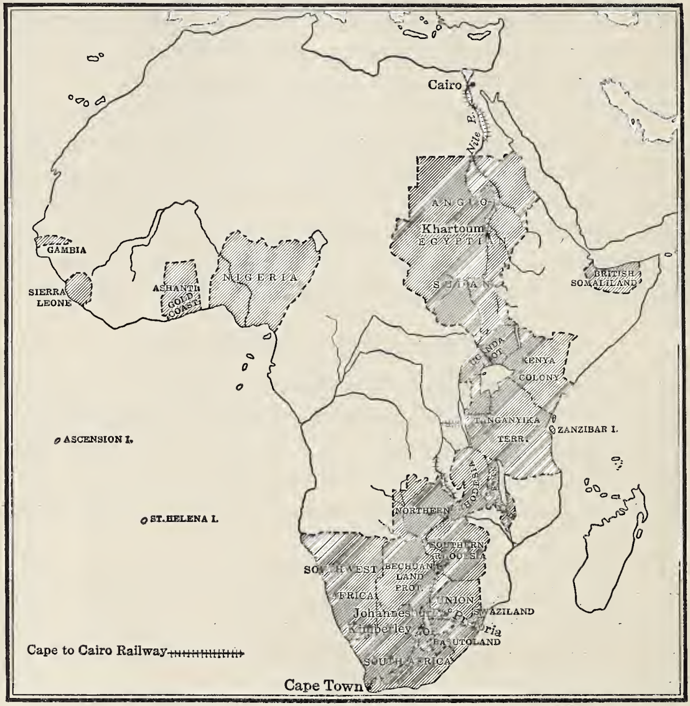

Cairo
Nile R.
ANGLO-
Khartoum
EGYPTIAN
SUDAN
GAMBIA
SIERRA LEONE
ASHANTI
GOLD COAST
NIGERIA
BRITISH SOMALILAND
UGANDA PROT.
KENYA COLONY
TANGANYIKA TERR.
ZANZIBAR I.
ASCENSION I.
ST. HELENA I.
NORTHERN
RHODESIA
NYASALAND
SOUTHERN RHODESIA
SOUTH WEST AFRICA
BECHUANALAND PROT.
UNION
Johannesburg
Pretoria
SWAZILAND
Kimberley
BASUTOLAND
SOUTH AFRICA
Cape Town
Cape to Cairo Railway

Fig. 59. The British Empire in Africa

It is a great grazing and farming country. The native black people tend great herds of camels, cattle, sheep, and goats. Over 5,000,000 herdsmen and farmers live in little villages scattered over 1,000,000 square miles of territory. By means of irrigation the Anglo-Egyptian Sudan produces for Great Britain increasing amounts of cotton. Together with Egypt, it was a possession well worth having, for it helped to make the trade route to India safe and to supply Great Britain with food products. In the 50 years after 1870 Great Britain took nearly one third of the continent of Africa.

Today the British domain in Africa totals over 3,800,000 square miles, an area larger than the United States. This gives the British government an unbroken stretch of territory, about 4000 miles long, from the southern boundary of Egypt on the north to the Cape of Good Hope on the south.

A Brief Outline of how Great Britain's Colonies were obtained in Central and Southern Africa

Find Cape Town on the map of figure 59. In 1815 British traders and settlers established a colony at this southern tip of South Africa, where there had been a Dutch settlement since 1652. By 1820 a considerable number of English emigrants had moved there and had settled east of Cape Town.

In 1834 the Dutch moved northward, in the neighborhood of the Orange and the Vaal rivers. These Dutch "Boers," as they were called, were farmers. As the British settled at the southern tip of the continent, many of the Boers moved still farther north, hunting better land. By 1890 there were many thousands of these Boer farmers in this region, where they had formed two independent states — the Orange Free State and the Transvaal Republic.

After 1870 English traders moved in north of the Transvaal Republic. Cecil Rhodes, a daring and enterprising explorer and colonizer, was one of these. In 1889 Rhodes formed a great trading company known as the British South Africa Company. Many English people invested their money in this company. In much the same manner as the English East India Company had claimed and governed India, Rhodes's company now subdued and governed the natives of "Rhodesia," as the region soon came to be called. It is now a great stretch of country, some 440,000 square miles in extent, in which live nearly 2,000,000 natives with only about 44,000 white men.

When the British traders first went into this region, they persuaded the native ruler, Lobengula, to sign papers, giving them sole right to mine minerals in that country. The English sank their mines and built settlements and forts.

When Lobengula discovered that he had signed away his people's rights, he wrote to Queen Victoria of England, and begged her to help him get back control of the land of his people. A letter came back, promising him that the Englishmen in Rhodesia "may be trusted to carry out the working for gold in the chief's country without molesting his people, or in any way interfering with their villages, cultivated fields, or cattle."

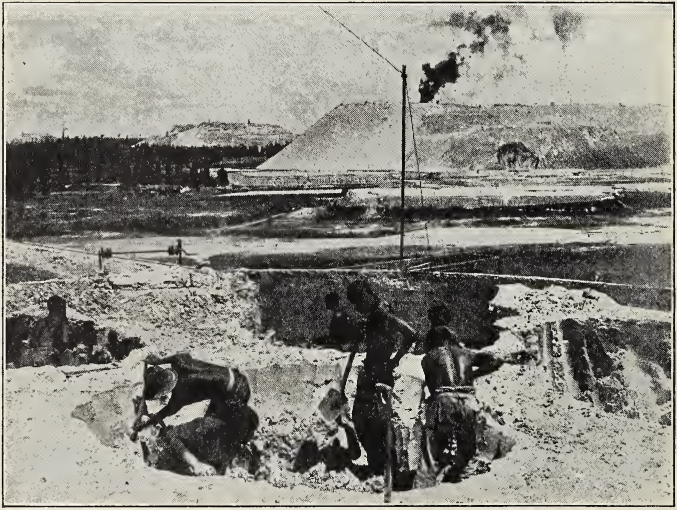


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FIG. 60. Africa has been valuable to Great Britain for its gold mines as well as other products. Rhodesia and the Union of South Africa possess the richest goldfields in the world. The mine shown in this illustration is situated near Johannesburg

But matters got worse in spite of the letter from the queen. The British mine-owners compelled the natives to work for them in the mines. The natives rebelled, and two years after the paper had been signed an English armed force was raised to invade and occupy this part of Rhodesia.

In the warfare that followed many natives were killed, and Lobengula was forced to submit. In despair his people said: "Our country is gone, our cattle are gone, our people are scattered, we have nothing to live for . . . we are slaves of the white man, we are nobody and have no rights or laws of any kind."

The gold-mining continued. In the 25 years between 1890 and 1915 about 8,000,000 ounces of gold came out of Rhodesia. The country had paid the British traders well.

In the meantime valuable gold and diamond mines had been found in Dutch territory (find Kimberley on the map on page 142). For many years the British and the Boer settlers had lived side by side, but not in a very friendly way. As the years went on the British and the Boers were constantly quarreling. In 1899 open warfare broke out. British troops were sent down and after three long years conquered the Boers. Although the British government supported their traders and settlers, the British people themselves did not like the Boer War.

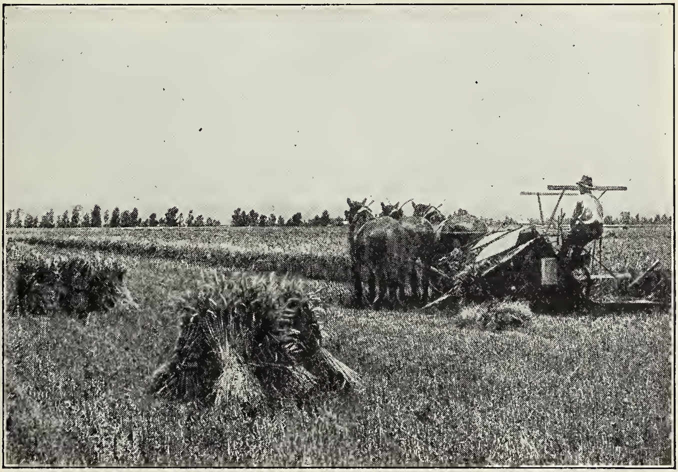

FIG. 61. This scene in South Africa might be one in the wheat-growing region of our own country. However, it is the power of muscles — either of men or of animals — which still does most of the work in Africa, and helps to feed the millions of city dwellers in Great Britain

Once the war was over, however, the British leaders and the Boer leaders worked together to set up a new government. In 1910 the Union of South Africa was formed. This included both the British and the Dutch colonies — the Cape of Good Hope, Natal, Orange River Colony, and Transvaal. A Boer general became the first prime minister of the new state, and the leading officials were all Boers. Since that time the people have elected their own legislature, but have been under the general control of Great Britain.

While these events were taking place in southern Africa, Great Britain had been adding other territories to her Empire in central Africa, south of the Sudan. The *Kenya Colony* was made a part of British territory in 1887, and the *Uganda Colony* in 1894. Great Britain then owned a complete right of way from Egypt on the north to the Cape of Good Hope on the south — with one exception. This exception was a fairly large block of land called the *Tanganyika Territory* (formerly German East Africa), which had been settled by German colonists and was claimed as a part of the German Empire. You will learn in a later chapter how, as a result of the defeat of Germany in the World War, 1914–1918, this and other territory was added to the British Empire.

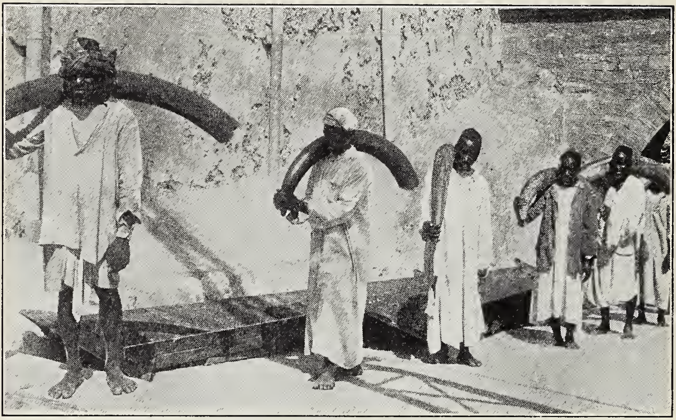

Fig. 62. Natives of the British colony of Kenya, laden with elephant tusks, on their way to the ships in the port of Mombasa

In 1919, therefore, 100 years of empire-building in Africa were at an end, and Great Britain controlled an unbroken stretch of land from Egypt to Cape Town.

In many parts of this territory her engineers were mining gold, iron, copper, tin, and other metals, and diamonds. On the uplands British ranchers were raising great herds of sheep. On the fertile stretches of low land British farmers were raising wheat and other foodstuffs to help to feed England's hungry millions. In the north, in Egypt and Anglo-Egyptian Sudan, Great Britain was building irrigation works on the Nile River and bringing millions of acres of rich land under cotton cultivation. In Kenya Colony and Anglo-Egyptian Sudan elephants were hunted for the ivory of their tusks. Villages, even good-sized towns, were appearing at a number of places in Africa.

The Cairo to Cape Town railway

To bring the products of this great region out to the coast where they could be shipped to England and other countries, the English colonizers saw the need of railroad transportation. So they planned a great project — a railway which should connect the northern and southern parts of Africa from Cairo to Cape Town by way of British territory. They not only planned it, but they began work on it; and so rapidly has construction continued that already several thousand miles of track are in use. This railroad is a tremendous undertaking. In some places it crosses the eastern part of the treacherous Sahara Desert; in others it passes through thick jungles in central Africa, the home of many wild beasts and savage black men.

This, then, is merely a brief outline of the manner in which Great Britain made nearly a third of Africa a part of her Empire. In this huge region are many kinds of land, many kinds of climate, and many kinds of people. To describe them all would fill volumes.

We do wish to give you a glimpse, however, of this remarkable land. To do so let us take a trip with two young men who recently made a journey over the route that the completed railway will follow. For several months they traveled by train, by boat, and on foot over the entire length of the continent.

From Cairo to Cape Town — a Trip through Great Britain's African Empire

A young American named Tom Churchill, and a young Briton, Cyril Lawrence, had been talking together for several hours on the balcony of a hotel in Cairo, Egypt.

The American had been discussing with Lawrence the plan of the Cairo to Cape Town railway. In their conversation the talk had turned to the subject of Britain's Empire.

"Do you mean to say," asked Tom, "that Englishmen can live in the wilds of Africa as they do at home?"

"Yes, indeed," said Lawrence, "I have played tennis many an afternoon in central Africa where there aren't a dozen white men within 2500 miles. I have sat down to tea afterwards in a typical British home. I have seen British officers who are as careful about their clothing as if they were at a London reception."

"I'd like to see it," replied Tom.

"Well, if you really want to see it, you might join me. I'm going to start down through Africa to Cape Town next week."

"I've a good notion to do that. I can think of nothing more exciting than a trip through Africa. Besides, I have a great many ideas about the British Empire that I should very much like to clear up."

It was agreed that the two young men would make the 6000-mile trip, taking the railroad as far as it went and then using any other kind of transportation that could be had. Tom was a bit astonished to find that the railroad went only as far up the Nile as Khartoum (on the map opposite page 140 find Khartoum and the other places mentioned).

"Say, Cyril," he exclaimed, "I thought the railroad was a fact. I'm beginning to think it's chiefly on paper now."

"You wait, old boy," replied Cyril calmly. "Before we reach Cape Town, you'll wonder how men have been able to build as much of it as they have. Wait until you see some of the country we have to cross. I'll wager you'll wish you were back in New York."

The next evening they took a sleeper for the Egyptian city of Luxor (see the map on page 140). They arrived early the next morning.

After a day spent in looking at the Valley of the Kings they went on, traveling along the Nile.

Late in the afternoon the train reached a tiny settlement, where they changed to a small river boat for a few miles. Two English engineers, who were building a new dam in the Nile, joined the passengers. This dam was to bring another 1,000,000 acres of Egyptian land under cultivation. Everyone talked about the plan, in which great amounts of British capital are invested.

The next morning at sunrise Tom was on deck. The sun came up like a great golden plate. The air was cool and hazy, but in a moment the mist rose and the sun shone down bright and hot. A Mohammedan sailor came out on deck, knelt on his prayer rug, and recited his morning prayer.

By noon the boat had reached the Sudan country. Cyril got off the boat at the first stop and haggled with an Arab salesman about some equipment. Tom was very much amused to hear his friend using a strange language and gesturing so violently. He was fascinated by the crowds of Arabs and blacks everywhere.

Later, on the deck, Tom asked one of the British engineers what the Sudan country was like.

"The Sudan is the black man's country," replied the engineer. "The word itself means 'black' in the native tongue. It is a country with a rich future, but something disastrous is always happening. One year there is no rain. The next there are terrific floods. Another year there will be a famine or malaria or sleeping sickness. The natives say the country is bewitched when such things happen, and they crawl off into the jungle. Then, as you Americans say, try and get them to work."

The boat wound its way farther and farther up the Nile. Everywhere there were interesting sights — Egyptian temples, a Roman fort, a temple of the sun. At length the short river trip was ended, and they again took the railroad. This portion of the railway was old. It runs from Halfa to Khartoum and was built in the 1890's.

The trip took over 24 hours, owing to a sand storm which stopped travel for several hours. The storm arose without a moment's warning and was so violent that it swirled the sand from under the rails. Everyone in the train breathed dust and sand for a half-hour. When the air was calm again Tom and Cyril got off for a moment. The sun sent down fiery rays, and the very rails seemed to quiver under the heat.

"I'm beginning to appreciate what railroad-building across a desert must mean," Tom remarked.

"How large is this part of the Sudan country in which England is especially interested?" he asked after they had arrived in Khartoum.

"About 1,000,000 square miles — nearly a third as large as Europe," replied his friend. "Some day it will be a great cotton-growing land. We hope it will raise enough cotton so that we shan't have to depend upon you Americans to feed our looms.

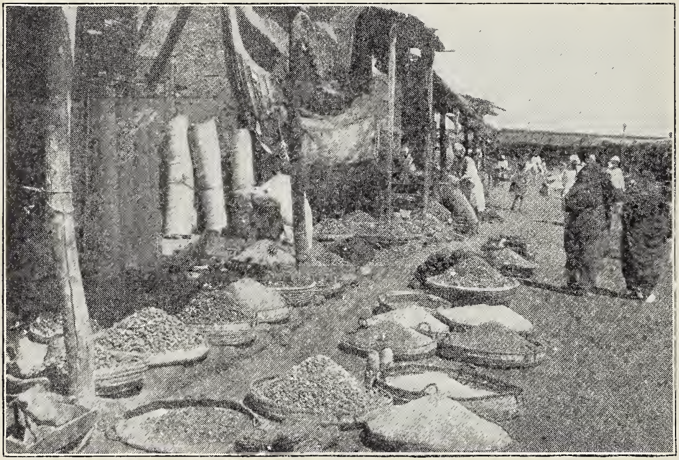

FIG. 63. A street in Khartoum. Dates and grain are seen piled up on trays ready for sale. Here one wears thick clothing, for protection not from the cold but from the intense heat

"But I say," he exclaimed, "we must buy our supplies here, and we have no time to waste. This is the edge of civilization. From now on we shall have to camp out a great many nights."

They started off in a hurry, but they had gone only a short distance when Tom found that it was impossible for him to travel at more than a snail's pace in the great heat. The temperature was 115 degrees. There was scarcely a blade of grass or a tree in Khartoum; everywhere were sand and sunlight and heat.

That night, as they were sitting in a cool breeze on the hotel veranda, they were startled by a mysterious throbbing noise beating out a steady rhythm. Cyril said he believed it was a tom-tom. They followed the noise and found a feast going on among the natives. Black drummers pounded shallow drums while some of the onlookers joined in a wild, whirling dance. The noise of the tom-tom lasted until dawn.

Before it had stopped, the boat left Khartoum. For four days it went up the Nile through desert land. The heat was frightful. But at length the desert was behind them, and there was only fertile grass land on either river bank, where thousands of cattle grazed.

"These people along the shore don't look like Arabs," remarked Tom one day.

"No, they're blacks. Look at those chaps over there with feathers in their hair and rings in their noses."

Tom looked eagerly and then exclaimed: "Look at that fellow! What in the world is he wearing on his head?"

"Oh, that's merely a fancy African headdress. You'll see a great many variations of that before we reach Cape Town. These Johnnies think there's nothing so beautiful as a bald head; and when nature hasn't given one to them, they often shave it. These beauties used not to work. They left that for their women. That's all changed today, however. See that chap with all the copper bracelets. Some of the dandies wear so many and such tight bracelets that their hands grow numb and useless."

For several days the boat continued its winding passage, and on either bank was big-game country. Tom laughed uproariously at the large hippopotamuses splashing in the shallows of the White Nile.

"Do you know," he said after watching them for a time, "I believe those beasts are curious about us? They sink when they see the boat coming, but they keep coming up to peek at us."

"Many of the animals in unsettled Africa are curious," replied Cyril, "for the presence of man is so new and strange to them that they are not afraid."

Across the plains they could see gazelles and antelopes and many other varieties of horned animals. On the banks of the river lay great, lazy crocodiles. They slipped into the water without a splash as the boat drew near. At sundown flocks of birds flew overhead. They screamed and chattered in the trees, so that the noise was almost deafening. Then after sundown came mosquitoes and other insects in clouds. The deck became so infested that it was almost impossible for the hot and weary passengers to sleep.

The next day, however, they were in the high-grass country. There Tom saw his first wild elephants. They proved very shy and disappeared in a few moments in the tall grass. The swarms of mosquitoes from the marshes were terrific.

An English major left the boat in the tall-grass country to go into a district that was infested with plague and fever. He remarked that a year in that country would count double on his service record.

On deck the travelers were exchanging stories of central Africa. Tom listened spellbound. He was amused at the discussion of how African men get their wives.

"To bind the marriage bargain of a chief's daughter the suitor gives the chief about 50 cows," said the story-teller. "If a father is an ordinary man, the suitor for his daughter's hand gives about 10 cows."

They were going into malarial country, where dampness rose from the ground like a mist. The air was hot and sticky. An Englishman hailed the boat. He was spending his life in those unhealthful jungles trying to teach the black men peace, morality, respect for property, cleanliness, and honesty.

"I'm beginning to have a lot of respect for some of your Englishmen who come here to live," said Tom. "I always thought that they were pretty rotten to the natives."

"These chaps you have seen are all exceptionally fine," replied Cyril. "Some of our men don't treat the natives any too well. They make their fortunes out of the black men's country and then go back to England to live. I must say, though, that most of the empire-builders who come out here leave their mark in the way of at least one accomplishment that will develop the country."

"What do these black fellows get out of English government?" asked Tom.

"They are given ever so many things they would never have otherwise. They are given a good government and peace. They will have railroads some day. The government is planting cotton on plantations, rubber, sisal, coffee, and corn."

"Yes, but in what way do those things help the black men?" persisted Tom.

"My dear chap," replied Cyril. "Isn't a good government, peace, and the opportunity to improve one's standard of living a help to any man, black or white?"

The next morning the boat landed, and the two travelers hired a troop of able negro boys to carry their loads through the jungle.

"From now on we depend on our feet alone," said Cyril cheerily, as they started on their way.

The negro boys were strong fellows, each of whom carried on his back a heavy load. They walked barefoot through the bush.

At night the travelers made camp in the black darkness of the tropical forest. Near their camp was a native village surrounded by saplings to keep out prowling animals. No sooner had the camp settled for the night than a great uproar started in the village. Tom-toms began to throb a wild and furious measure. A hundred voices began to sing. Tired as Tom and Cyril were, they crept near to the village, where they stood still and watched the natives dancing and singing around a huge bonfire in the center.

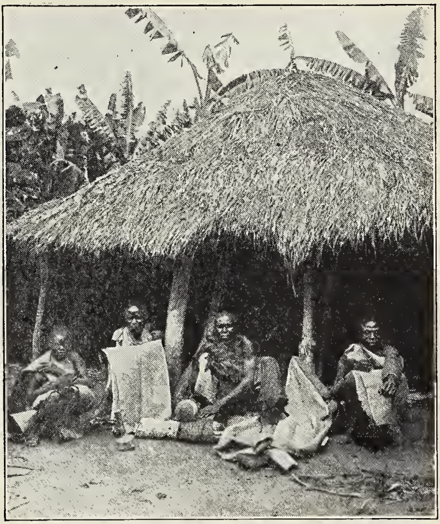

FIG. 64. A home in Uganda. The natives are proudly displaying pieces of cloth, which are the result of their craftsmanship

The next morning before sunrise the troop was on the trail again. They passed several days traveling through country which reminded Tom of New England. The land was rugged and hilly. Then they plunged into thick jungle once more. This was at the tip of the Sudan country, in the Uganda Protectorate.

Now and then they passed small native settlements. "Living is certainly simple here," said Tom. "Sixteen poles and a lot of straw — and you have a house!"

At length they came to the cradle of the Nile — Lake Victoria. Tom could scarcely believe it *was* a lake. Cyril told him that except for Lake Superior it is the largest in the world and is nearly the size of Scotland! They tramped its borders for days, seeing many wild buffaloes and elephants.

As they reached the southern end of Lake Victoria (find it on the map opposite page 140), they saw high mountains, which are near the equator. ("Like the Andes in South America," thought Tom.) The peaks were clouded, but Cyril assured Tom that they were snow-capped all the year round.

One night in a small settlement they slept in a good, clean house owned by an Englishman. Cyril suggested that they stay there a few days to change boys and to hunt lions. The hunt proved to be tremendously exciting to Tom, but they failed to hit anything. On their trip they saw countless herds of wild animals, many varieties of which Tom had never even heard of. There were also giraffes, foxes, zebras, ostriches, jackals, hyenas, and all kinds of gazelles. "All the animals in the zoo!" said Tom. At night they could hear lions roaring a short distance away.

"Do you know," said Cyril the next morning, "Parliament actually had a discussion about the lions in this region."

"How did that happen?"

"They killed so many natives and Indian coolies, who were building the railroad, that they delayed the engineers for months."

All day Tom expected to see the great beasts prowling in the underbrush, and he kept an eye on his gun constantly. They were off through the Masai country, a land of very savage natives.

One morning while in upper Tanganyika Territory Cyril calmly announced that their next jump was a 3000-mile tramp down to the Union of South Africa.

"Tanganyika Territory was German before the war, but now it's all British."

Late one afternoon the travelers stopped at the home of another Englishman. Tom was much astonished to notice that tea was served immediately after their arrival. The tea table was set with linen, china, and silver.

"I'd never have believed that an Englishman could live alone in the jungle region and continue to serve tea," exclaimed Tom.

The next morning their host gave the new gang of boys strict orders to take good care of the strangers. The boys walked from twelve to eighteen miles a day for two weeks, each with a heavy load. They were fine boys. At the end of the trip they each received the regular rate — $2.50.

All along the way they found bad water and many of the deadly tsetse flies, which cause sleeping sickness. The days were insufferably hot, and wild beasts roared near their camp at night.

"This will be a great country some day, Tom," remarked Cyril, as they looked at the fertile black soil they were treading, the plantations they occasionally saw, and a rather new railway line. "More railways are going to be put through here and more plantations opened up. Some day this will be one of the wealthiest of the British colonies."

Then they crossed into Rhodesia, where they saw their first gold-mining center in Africa, and Tom remembered that this was one of the richest metal countries in the world. The mines of the region are owned and run by wealthy British companies.

"The natives here aren't at all like the natives in the interior," said Tom one day. "They are much more muscular and heavy. What do they do?"

"They used to be great warriors," replied Cyril, "but now since we've subdued them they just sit around in the sun all day. They dislike work because that is beneath a man's dignity."

The next day the travelers saw the most beautiful sight of the entire trip. It was the Victoria Falls in the Zambezi River. The greatest waterfall in the world, it has a sheer drop of water twice as great as that at Niagara. The scenery is indescribably beautiful. The spray from the falls can sometimes be seen for 50 miles.

Tom and Cyril sat for a long time listening to its thunder. Finally Tom cupped his hand and shouted into Cyril's ear, "Just think of the hydroelectric power in these falls when this territory is industrialized!"

As they stopped one day to rest at a small farm kept by a Dutchman, Tom heard several sounds like pistol shots. Before he could remark about the noise a great train of sixteen oxen appeared around a bend in the road. A man walked beside them in a cloud of dust, cracking a 40-foot whip over their heads.

"That chap is a Boer," said Cyril.

"Well, he certainly looks like a Dutchman. Is he a farmer?"

"Yes, most of the Boers stick to the land."

"This veldt is a wonderful land," said Tom as he looked about him. The land was rolling and rather rocky. Great trees which looked like enormous umbrellas dotted the landscape. The bush shone red and gold in the autumn sunshine, while occasional orange trees in bloom lent their perfume to the air.

© Publishers' Photo Service

FIG. 65. Victoria Falls, the greatest waterfall in the world

"Do the Boers speak English?" he went on.

"Not they! They refuse to learn English; so, besides the native tongues, we have two other languages in the Transvaal and all through what was once Dutch country. You'll notice everywhere that the signs are both in English and in Dutch."

Johannesburg was the next long stop (after Pretoria). It was the first modern city they had seen since leaving Cairo. Cyril told Tom that they were back in civilization. There were many railroad lines all through this country.

In Johannesburg (see figure 59) they visited the gold mines. Later they visited Kimberley, where Cecil Rhodes found his first fortune in diamonds. Tom was a little shocked to find how the great companies run the diamond mines. The workers are virtually prisoners. They live inside a compound surrounded by barbed wire and patrolled by mounted police. They cannot return, once they quit the compound. The guard explained that there were enough diamonds in the mines to make jewels almost as common as glass beads if they were marketed freely. The companies mine only a small amount, so that the value of the diamonds can be maintained.

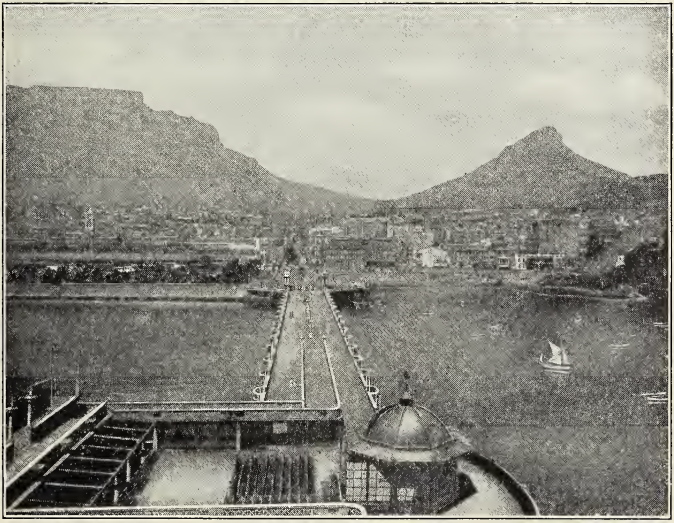

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Fig. 66. Cape Town

From Kimberley the friends went on to Cape Town. It was spring before they arrived, and the country was filled with flowers of the most exquisite colors, for which the mountains made a fine background. Cape Town itself, you can see by figure 66, looks like a European city. The trip was at an end.

Tom took the boat for home, and as he left the harbor Cyril called to him the message of the cape, "Good-by and good hope."

All the way home Tom thought and talked a great deal about British empire-building. He decided that Englishmen were splendid colonizers, governors, and business men.

What do you think are the things in favor of empire-building? What do you dislike about it?

SUMMARIZING THE GROWTH OF THE BRITISH EMPIRE

We have now studied briefly several of the chief divisions of the great British Empire — India, the Mediterranean lands, and the African possessions.

If there were space in this book we should study many other smaller possessions, for example, the Federated Malay States, parts of Borneo, and many scattered islands in all the oceans. In China, Great Britain still controls many ports and sections of land (see Chapter XIX). She has possessions in the West Indies; she owns the Bahama Islands and Bermuda. She controls land in Central America and in South America.

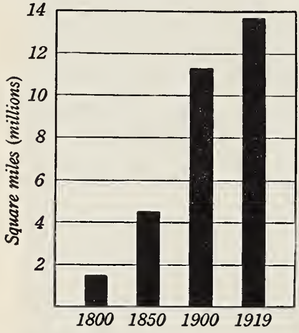

FIG. 67. Growth of the British Empire, 1800–1919

The map of the British Empire (figure 46) shows that its islands stretch around the world. Why did Great Britain want them? Chiefly because they provide convenient places where her merchant vessels and her naval vessels can stop for repairs and for coal, water, food, and other supplies that they may need.

The rapid growth of the British Empire is summed up in figure 67. In 1800 it contained 1,500,000 square miles of territory. In 1919, at the close of the World War, it comprised more than 13,000,000 square miles. In 1800 the Empire had 2 per cent of the world's area; in 1919 it totaled about 25 per cent. One fourth of the land area of the world and nearly one fourth of all the people in it are now a part of the British Empire.

Now you are prepared to see the relation between the growth of

British trade and the British Empire. Turn back to Chapter IV, figure 35, and compare it with figure 67. You will discover the interesting fact that British trade and the British Empire grew together. During the very years that Great Britain was acquiring more and more colonies, enlarging her Empire around the world, her trade with the outside world grew rapidly.

You can readily understand now how Great Britain came to build the British Empire. As the Industrial Revolution spread, machines were invented, more and more factories were built, and more people worked in machine manufacturing. The owners of the factories and the mines, of the railroads and the stores, made larger and larger amounts of money. What to do with all this money became an increasingly important problem. Some of it was used in England, of course, to build new factories, to install new machines, to hire more workmen, to build more railways and more electric-power stations. Much of it was used for mere luxuries.

There was more surplus wealth, however, than could be invested in Great Britain alone. Furthermore, the British people did not have money enough to buy all the goods made in their factories. So the factory-owners had to look for other places outside of Great Britain to sell their goods and to invest their money. They went to India, to Canada, to Egypt and other parts of Africa, to China, and to far-off Australia. They searched for markets for their goods over the entire world.

These Englishmen with surplus capital to invest also decided to build factories, to dig coal mines, and to open oil wells in the far parts of the world. They formed mining and manufacturing companies in each of these distant parts of the British Empire. In India they built railroads and textile factories, and raised cotton and wheat. In Africa they mined gold, diamonds, copper, and tin, and raised sheep, cotton, and wheat. In Canada, in Australia, in the Malay regions, — in every part of the earth,— they did these same things. So it was that before the World War the British Empire extended around the world and trade went on vigorously between the colonies and Great Britain.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

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*KELLY, R. TALBOT, and FINNEMORE, JOHN. Egypt and the Holy Land (Peeps at Many Lands Series). The Macmillan Company, New York, 1908. An interesting account of the habits and customs of the people.

*KIDD, DUDLEY, and GOODALL, A. M. South Africa (Peeps at Many Lands Series). The Macmillan Company, New York, 1908. A good account of ways of living in this region.

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*"The Land of Egypt," *National Geographic Magazine*, March, 1926, pp. 270–298.

"Along the Nile, through Egypt and the Sudan," *National Geographic Magazine*, October, 1922, pp. 379–410.

*"Cairo to Cape Town, Overland," *National Geographic Magazine*, February, 1925, pp. 122–260.

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UNIT IV

FRANCE: BOTH FARMER AND MANUFACTURER, THE WORLD'S SECOND LARGEST EMPIRE

FRANCE: BOTH FARMER AND MANUFACTURER, A LEADING INDUSTRIAL NATION, AND THE WORLD'S SECOND LARGEST EMPIRE

There are three large industrial countries in Europe — Great Britain, France, and Germany. In the nineteenth century each of these countries, like the United States, adopted machine manufacturing. Each of them built up trade and an empire in other parts of the world.

In Chapters III–VI we have learned how England changed from a little country of manors to a huge industrial empire totaling nearly one fourth of both the land and the people of the earth. In Unit IV we shall find out what happened to France while England was doing this.

In Chapter VII we shall learn important differences between France and Great Britain — differences in the amount of land, differences in the way in which the people got a living before the Industrial Revolution, and differences in the way in which they work and live today. We shall try to understand how the French live by noting the extent to which they have taken up manufacturing or have remained on the land as farmers. We shall find out the way in which their climate, soil, and natural resources determine the way in which they live — that is, how these factors influence their standard of living. *We shall compare this standard of living with that of the British and the American people.*

In Chapter VIII we shall study how it happened that France, like Great Britain, acquired great amounts of land in other parts of the world. She too built a great world empire, which includes nearly one twelfth of the land area of the earth. We shall see in this story whether the trade of the French business men had anything to do with the building of the empire. We shall learn whether the French people wanted the empire, and what they get out of it today.

When we have completed the work of Chapters VII and VIII, we shall have studied something of the history and also the present ways of living of three countries — the United States, Great Britain, and France. The people of these countries, together with the people of their possessions, occupy approximately two fifths of the entire earth.

CHAPTER VII

FRANCE: A COUNTRY OF AGRICULTURE AND MANUFACTURING

The story of the descendants of Johanis Lafarque, who lived on the same plot of ground for 1150 years

Back in the days of Charlemagne (800), a lonely peasant staked his farm north of the present city of Toulouse. Here the energetic husbandman, Johanis Lafarque, cultivated with rude implements his plot of ground and builded himself a habitation. Here he founded a family whose descendant recently has been honored (1924) by the French government.

The Minister of Agriculture has conferred upon Pierre Lafarque a special decoration given to all farmers whose families have tilled the same plot of ground for three or more centuries. The family Lafarque heads the list of this aristocracy of the soil in France with its record of 1151 years on the original land acquired by Johanis Lafarque in 772.

"Surely, it is very hard sometimes," said the present Pierre Lafarque recently in telling of his life on the 1150-year-old estate. "But here the earth is generous." And the old man proudly pointed out to his guest the twenty-five acres of land planted with wheat and grape vines. . . .

In the large dining room are still to be seen beautiful cupboards and priceless wardrobes, heirlooms carefully preserved by ancestors. Mme. Lafarque, like her husband, still performs with the simply dignity of her peasant ancestors the homely tasks that were theirs.

"Why, certainly, monsieur," she said, "I still spin." And this wise woman of a wise race added, "I have never had to buy any sheets since I set up housekeeping."

So through the centuries have the French peasants clung, often painfully, to the same little pieces of soil. Hard-working men and women, who sow their crops in the spring, garner them in the fall, and go to church on Sunday. When the season is a good one, they, unlike the American farmer, who puts his surplus into Fords and radios, buy an extra pig or a piece of new machinery.[1]

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[1] Adapted from Diana Rice's "Ancients of the Land," in the *New York Times Magazine* for January 20, 1924.

Perhaps you are a little surprised at this description of the life of a French farmer. You may have thought that France, like Great Britain and the United States, is a powerful industrial nation.

France is indeed a powerful country, with the second largest army and the second largest empire in the world. She has long played a leading part in world history. Today she too trades with the world, just as do the United States and Great Britain.

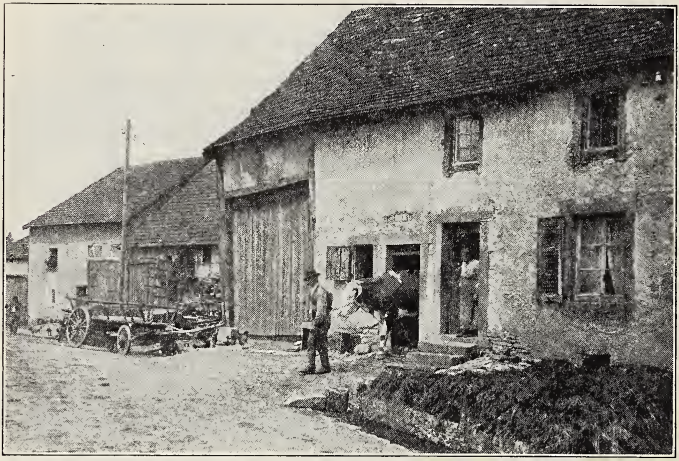


Fig. 68. A typical small French farmhouse. The house and barn are under one roof. To reach his fields the farmer often has to walk a mile or more

But the development of France from the days of long ago has been different from that of Great Britain or of the United States.

The French people, you see, have always loved the land. Many families, like the Lafarques, have lived on the same plots of ground for hundreds of years. The land is dear to them and they enjoy cultivating it. Thus farming is a very important phase of French life.

But machines and factories and coal and iron are beginning to play an important part, too. This second phase is a newer one. In this chapter we shall see a bit of life in the old France and how the new ways of living developed.

How large is France?

Before we learn much about what has taken place in France, we should have some idea of the size of the country. If you look at figure 69 and compare the area of France with that of the United States, you will perhaps be a little astonished. For a powerful country with a great empire it is small indeed. Its area is 212,000 square miles, about 50,000 square miles larger than California. But for such a small area France is the home of many people—totaling in the year 1926 more than 40,000,000.

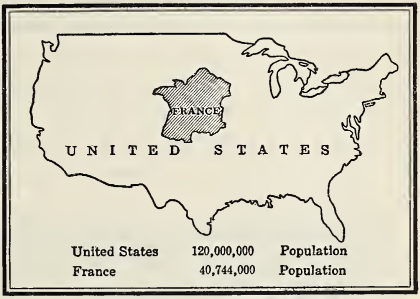

FRANCE
UNITED STATES
United States 120,000,000 Population
France 40,744,000 Population

Fig. 69. A comparison of the area and population of France and the United States

In your study of France, therefore, keep in mind that it is more than twice as large as Great Britain, and has almost as many people.

In 1750 most of the people lived a life of toil and poverty

You have learned how England was changing in the 1700's. People were leaving the farms, towns and cities were growing, industries were developing, and machines were slowly replacing hand tools. In France the story was very different.

If a French Rip Van Winkle had gone to sleep in the later Middle Ages and had suddenly awakened in 1750, he would have thought that he had slept merely overnight. Everything would have looked very much the same. On the plains he would have seen farmers tilling their little farms with the same kind of wooden plows which he had used. He would have seen them working hard for a very poor living — just as he had worked.

Part of the land would be lying idle, resting. Small stacks of hay might be in sight. This would show that some cattle would be butchered in the autumn, for there would not be enough hay to feed them through the winter. The fatted ox of the herd would be a small beast of about 400 pounds. The farmer would not kill him, however, for he would be very proud of his size and weight.

If the medieval Rip were to visit one of the villages nestling among the trees, he would find much the same kinds of houses as in his day. He would see people weaving about the same kinds of cloth on the same kinds of hand looms. Buying and selling would be going on in the same way. If a stranger finally told him the date, he would be unable to believe his ears. It would seem too much like his own time of, say, 1500. Things certainly had not changed much.

There were hundreds of little villages in France in 1750, and they were all much alike. Many of them were connected with some lord's estates like those we read about in England in 1160. The lord's houses were very splendid, but the village cottages were very poor. The small farms of the peasants yielded only a very meager living.

Life for the peasants of France was very hard. Arthur Young, the English agriculturist, whom we met for a moment in Chapter III, estimated that in the 1700's the *French peasants paid four fifths of their small income in rent and taxes.* Imagine 80 per cent of a man's earnings going to his landlord, the church, and the king's collectors. One wonders that the French farmer had anything at all for himself and his family.

Here is a bit from Young's travel diary which tells something of how bad conditions were:

> *July 12, 1789.* Walking up a long hill, to ease my mare, I was joined by a poor woman, who complained of the times. . . . Her husband had but a morsel of land, one cow, and a poor little horse, yet they had 42 pounds of wheat and three chickens to pay as a quit-rent to one "lord," and 168 pounds of oats, one chicken and 1 shilling to pay to another, besides very heavy tailles [a kind of tax] and other taxes. She had seven children. . . . This woman, at no great distance might have been taken for sixty or seventy, her figure was so bent and her face so furrowed and hardened by labour — but she said she was only twenty-eight.

Today it is hard for us to imagine how miserably those peasants must have lived. Even with an unusually good harvest, they were on the point of starvation. According to the old journals, they often had to eat roots and herbs. They lived in one-room huts without floors or windows. They went to bed sometimes without supper, to shiver all night without enough covers over their straw beds. Most of the people of France were peasants, and the lives of most of these peasants were miserable indeed.

The Artisans in the Few Towns were Little Better Off

In the French towns of the 1700's lived craftsmen who made many different types of things. Some of the best artisans of Europe lived in France. Their products were famous for skilled workmanship. Historians tell us that in 1750 the cloth woven in France was plainly superior to that of England. One reason for this was that every weaver had to keep to a certain standard of excellence. There was a long list of rules and regulations, made by the government, that must be followed by weavers. After the product had been completed, it was tested before it could be put on sale.

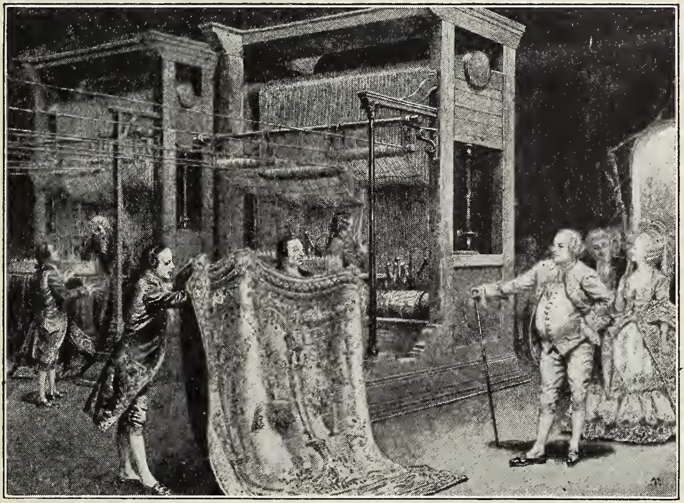


Fig. 70. The Gobelin factory in Paris was famous for its fine tapestries as early as the 1600's

These requirements were hard on the craftsmen, but they resulted in careful work and fine products.

The kings and their officials encouraged good workmanship among workmen of all crafts. In the late 1600's and early 1700's Louis XIV was king of France. He deeply admired fine arts and crafts and did all he could to encourage their development. He himself took control of the making of the Gobelin and Beauvais tapestries, the finest ever woven. He owned the Sèvres porcelain works, where beautiful dishes were made and decorated by hand. He encouraged the making of the fine French furniture now named after him. He invited into France foreign workers who were particularly skilled in handicrafts. Glass-blowers came from Venice, miners and ironworkers came from Sweden, weavers from Flanders, and lace-makers from Milan.

At that time, however, wealth was very unequally divided. A small number of nobles and clergy were very wealthy. But most of the people were peasants and craftsmen, barely able to get a living.

The Extravagances of the Luxurious Court Life

The kings of France in the 1700's had very gorgeous and fashionable courts. Perhaps never was there a more brilliant court life in Europe than during this period. Art flourished and luxury prevailed among the nobles.

The kings had splendid palaces. They spent fortunes in decorating these with furniture and paintings. Other fortunes were squandered on the favorites of the court. The courtiers wore rich clothing and jewels. King and court alike idled away their lives looking for pleasure.

The nobles of the court and the clergy paid no taxes. They lived on the income taken from the peasants, and the government did not ask them to contribute anything.

As the 1700's went on the misery of the peasants increased. The court became more luxurious. Taxes became heavier. Many of them were very unjust. There was the heavy land tax charged by the landowner for allowing the peasants to cultivate the land. There was another tax still more unjust — the salt tax. This

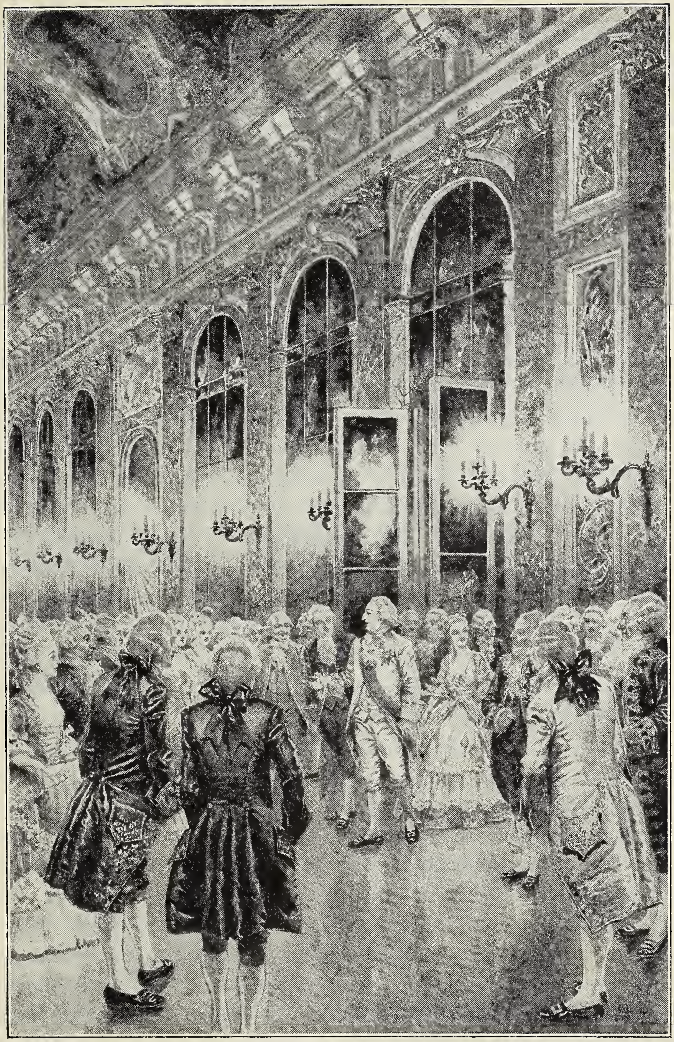


Fig. 71. A scene of court life at Versailles during the reign of Louis XV. It was in this very room that the peace agreement was signed after the World War

required that every person over seven years of age buy from the government seven pounds of salt a year whether he could use it all or not. In a single family, of course, this amount was much too great. The people were robbed of their little earnings in many other ways, and they were almost in despair.

No matter how the nobles and the government oppressed the peasants by taxes almost too heavy to bear, the money was never enough to meet their debts. The extravagance of the court was like a bottomless well into which all the money of the peasants poured. No matter how much was poured in, the well remained always dry. The country was sinking into debt and ruin.

The nobles were indifferent to the suffering of the peasants whom they did not seem to regard as really human, like themselves. King Louis XV's famous saying, "After us the deluge," showed not only his attitude but that of the courtiers and clergy of the time as well. Even when they thought that things could not always be thus they did not care. They were having a very good time. "Why worry about the future?" they thought.

But the deluge of which Louis XV spoke was indeed coming! For a century careless kings and their courtiers had been oppressing their people. The storm was gathering slowly. The nobles saw it. They saw the people growing more and more restless, but they did not care. Finally the storm did break, and the deluge destroyed the pleasure-seekers.

As early as 1652 the artisans in Paris, the court laborers, and the rest of the city workers were near revolution. In Paris the workers were able to see more clearly than the peasants the difference between their poverty and the wealth of the court. So it has been throughout history — city people have usually brought on the great revolutions. Living close together they are able to meet often and to talk over their troubles. They are able to unite more easily and in greater numbers than are people in the country, who do not keep in touch with one another as well as city people do. They can organize more easily for common defense.

IN 1789 THE REVOLUTION SPREAD ALL OVER FRANCE

At last the people of Paris rebelled. Street riots started. Public buildings were attacked and plundered. Mobs formed, and rioting became serious. The trouble was more than an outburst from discontented Parisians. It spread like a great flood over France. Townspeople everywhere started it, and the peasants gladly joined them. It was a great nation-wide revolution.

The king, the queen, most of the court, many of the nobles, and many of the bishops and their followers were beheaded. For years after 1789 the life of an aristocrat was far from safe. Palaces, prisons, and castles were plundered. Many of them were destroyed. The glorious ancient monarchy with its extravagance and its beauty was swept away almost overnight by the maddened people.

In 1789 the *Declaration of the Rights of Man* was drawn up, a document somewhat similar to the American Declaration of Independence. The better educated and more prosperous people gradually took charge of local affairs. People slowly settled down to peace again.

The French revolutionists declared that they had had enough of kings. They wanted a republic like that of the United States. A republic was formed which has finally triumphed in spite of several changes of government between 1791 and today.

WHAT DID THE FRENCH REVOLUTION DO FOR THE PEOPLE OF FRANCE?

The peasants wanted one thing above all. They wanted to own their homes and their land. They wanted to be permitted to cultivate this land for themselves and their families. They wanted to keep what the land yielded.

One of the first acts of the new democratic republic was to divide the land among the peasants. That meant dividing the estates which had belonged to the nobles. Every peasant was given a small piece of land. If the Revolution had spared the life of the noble, he was either driven from his estate altogether or he was given ownership of a much smaller piece of land.

By 1865 half of the French farmers owned their own land. The percentage of French agricultural workers owning land at that time was over 30 times as great as the percentage of English agricultural workers. This state of affairs was new in France, where most of the peasants had never before owned their land.

None of the results of the French Revolution made a greater change in the life of France than landownership. France was really an agricultural country; most of the French people at heart were farmers who were proud of their soil. Now they owned their own land, and they set about tending it more carefully than ever. Even with their old-fashioned tools they managed to raise larger crops than ever before. For the first time the French farmers, freed of their heavy tax burden, became somewhat prosperous.

The accompanying table shows very clearly the new spirit that entered into farming. The production of crops increased rapidly. What accounted for it? Chiefly the fact that more people were cultivating land which they owned. There was no more land than there had been before. The increase in the population was too small to account for such a great change. The farmer had no new farm machinery to help him. He still used hand tools to plow, harrow, and spade the ground as his grandfather had done. Sickles and scythes were still used to harvest. Nevertheless the peasant farming his own land succeeded in producing much larger crops. Certainly he enjoyed his work more than in the old days of slavery.

Production of Wheat and Potatoes in 1789 and 1848

Year	Million Bushels of Wheat Grown	Million Bushels of Potatoes Grown
1789	93	5
1848	152	275

After the French Revolution the Peasants began to raise New Crops

Before 1800 few potatoes had been grown in France. Within a few years after that time this became one of the most important crops in the country. Frenchmen began to recognize that potatoes are essentially a poor man's crop. They can be grown easily and cheaply. They can be used as one of the chief articles of diet when wheat, barley, oats, and other cereals are expensive.

In parts of the hilly country of France many peasants lived on a diet consisting chiefly of potatoes and chestnuts for six months in the year. Between 1789 and 1848 the amount of potatoes grown in France increased 55 times, from 5,000,000 bushels a year to 275,000,000 bushels.

The French also learned how to raise sugar beets.

Before 1800 Europe had depended upon the tropical sugar cane for its sugar. Then people learned that beets, which will grow in the temperate zone, can be made to yield sugar.

When Napoleon was emperor of France, fifteen years after the French Revolution, he introduced the growing of sugar beets. The English leaders, who heartily hated and feared Napoleon, made fun of this new sugar. A cartoonist of the day drew a funny picture of the little son of Napoleon with a beet root in his mouth. The child looked most unhappy. The nurses who were watching him said, "Suck, dear, suck; your father says it's sugar."

The English were a little hasty in making fun of the French sugar-beet industry, however. Beet sugar became more and more a substitute for cane sugar in France. There was great profit in it for French farmers. Turn to figure 78 on page 189. This graph shows that the increase since 1850 in the cultivation of sugar beets has been greater than that of any other important agricultural product of France. Today the sugar beet is one of the chief agricultural products.

France also became a sheep-raising country

At about the same time that the new crops were being introduced many French farmers turned to sheep-raising. A very fine breed of sheep, called the Spanish Merino, was brought into France from Spain. Many flocks of sheep began to dot the French hillsides. Their shearings were used to feed the French looms, which before that time had used foreign wool. So another agricultural product was added to the mounting list, and French farmers added to their prosperity.

WHY DID FRENCH INDUSTRIES ADOPT POWER MACHINERY SO SLOWLY?

You remember that in England factories were becoming fairly numerous after 1800. This was not true in France. The French people were slow to start manufacturing with machinery. Why was that?

First, the French peasants did not care to leave their farms

When the Industrial Revolution began in England in the 1700's, many people who were engaged in the crafts were thrown out of work and had to go into the factories to make a living.

If machines and factories had been introduced into French cities in the days of the old monarchy (before 1789), things might have been different there. Perhaps when the farmers were so hungry and burdened by taxes they might have been glad to go to work in factories.

But the Industrial Revolution did not really begin in France until long after the French Revolution. By that time the people had rid themselves of extravagant kings and nobles. They were farming their own land and were well pleased with the increased crops that they were producing every year.

At last the peasants were independent. They had always loved the work on their small plots of ground and now were even more content to stay on them. The growing towns and cities did not attract them. Why should they move away? They had made their houses strong and neat. Their fields were trim and well kept. They enjoyed seeing things growing in the sun. They worked in the fields while the daylight lasted. In the evening they walked back together to their little village, which was perhaps a mile from the fields. All went to eat their simple, evening meal. Then they would light their pipes and visit together. They were happy. What more did they want?

The Revolution, therefore, had brought them more than the ownership of land. It had brought them a feeling of *liberty*.

Second, war and revolution had made France very poor

During the 1700's France had gone through long and costly wars with England and had been defeated. She got into debt. Then, in 1789, came the Revolution; and after that, Napoleon, who became the ruler of France, wanted to be emperor of all Europe. He carried on wars, which wore out the different countries, especially France. Napoleon was beaten at the battle of Waterloo in 1815 and was banished to the island of St. Helena. Later there were other revolutions and changes in government. All these things upset the country so greatly that it was years before her people recovered. France was so exhausted and made so poor by these events that it was some time before people were able to think of buying machines and building factories to any great extent.

Third, France lacked a good coal supply

Throughout the early 1800's the French people were not concerned about lack of coal. Their ironmasters had been smelting iron with charcoal, as the English ironmasters had done. Since there was little iron made, there was no worry about cutting the forests for charcoal. The little coal that was used was imported from Sweden.

Coal Production in 1789, 1830, and 1860

Year	Amount of Coal Mined
1789	250,000 tons
1830	1,800,000 tons
1860	8,000,000 tons

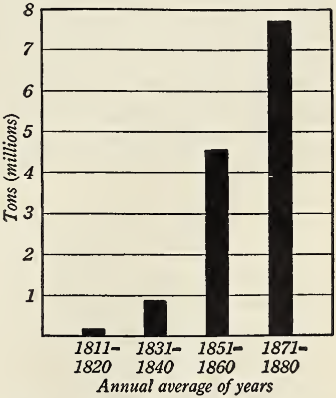


Fig. 72. Coal imported into France, 1811–1880

Before the Revolution a few coal mines had been found in northern France. At Anzin a company was organized as early as 1717, but not much coal was mined. Later some of the best coal in France was found there.

The French fields were so hard to mine that between 1789 and

1830 coal production increased only slowly. However, it had multiplied over 7 times between those dates, and 32 times in the next 30 years, as the table on page 177 shows.

When French manufacturers built factories after 1830, coal came into wider use. It was cheaper, however, to import coal than to develop the mines of France (see figure 72).

For these reasons there were almost no signs of an Industrial Revolution in France until 1830

About 1825 the first machines were introduced into France from England — 50 years after they had first appeared there. During the time that an increasing number of English spinners and weavers were tending machines run by steam engines, French craftsmen were still spinning by hand and using hand weaving looms.

England had not been eager to share her inventions with the world, and she was particularly unwilling to have France adopt them. France was her bitterest rival, and English business men feared that their trade might be threatened. It was not until 1825 that England permitted machines to be exported to other countries. Even after the introduction of the first machines into France, they were adopted very slowly by the French people. In 1850 much spinning and weaving were still being done in the homes on hand spinning wheels and looms. Even the new factories at Lille and Lyon were rather small enterprises. In most of them water power was used instead of steam.

France had much iron, but her poor coal supply held back the manufacture of steel

There were great deposits of iron in France. The map of figure 99 reminds us that a very valuable iron deposit lies in Lorraine, on the northeast border of France. This is, in fact, one of the best iron fields in the world.

Before the introduction of machines France was producing a small quantity of iron. If you will compare her production of pig iron (see the table on page 179) with that of Great Britain (figure 27) for about the same period, you will note how much greater the British production was.

Production of Pig and Bar Iron, 1789, 1830, and 1850	
Year	Number of Tons of Pig and Bar Iron
1789	69,000
1830	266,000
1850	416,000

For 100 years after Great Britain began to use coal for smelting iron, the French ironmasters were still smelting with charcoal. About 1839 France had only 106 coke furnaces to 445 charcoal furnaces. As late as 1846 three fifths of the pig iron made in France came from small charcoal furnaces near the forests.

OTHER INDUSTRIES, PARTICULARLY SPINNING AND WEAVING, CHANGED SLOWLY

The French weavers wove fine woolens, cottons, silks, and linens. These products were known everywhere for their quality.

In 1801 Lille had one cotton-spinning mill employing 90 hand workers. By 1810 there were 22 mills in the town, each employing from 60 to 70 persons. After 1825, however, hand weaving began slowly to be replaced by machine manufacturing. As machines were introduced, the production of cotton and woolen goods increased enormously. At the same time Lille's trade increased steadily, and it became known as a growing manufacturing city.

Here is a comparison which tells the story of how trade in woolen goods increased. The estimated exports of France were

1788	$4,800,000	worth of woolen goods
1865	79,200,000	worth of woolen goods

TRANSPORTATION IN FRANCE BEFORE 1850

The roads of France had long been better than those of England. Over 2000 years ago the Romans had built good stone roads in France — many more than they had built in England. These Roman roads were fairly well preserved during the Middle Ages. At the time of the French Revolution they were still in fair condition, so that the English were fond of saying that the French had good roads, but no goods to carry on them.

After 1800, when England was building turnpikes to make up for her lack of good roads, France also was improving her transportation routes. Napoleon, who ruled France from 1804 to 1815, had many new roads built. He also had the rivers dredged for shipping, for goods could be shipped more cheaply on waterways.

As early as the later 1600's the French people had been canal-builders. By 1850 France had a very good system of canals connecting the rivers. There was a canal between the Rhine and the Rhône rivers and one between the Marne and the Rhine. France has always used her waterways very wisely.

Although railways were introduced about the same time in France as in England and the United States, they were built much more slowly. About 1825 horse-drawn trains, similar to those which Americans had experimented with, were used in some places.

Not until after 1840 did railway-building in France begin in earnest. About that time there were more than 300 miles of railways; by 1850 there were over 2000 miles of railways. At the same time England had over 6000 miles of railways, and the United States about 9000 miles.

France's slowness in building railways was due to several causes. The most important were, first, that her iron production was small and locomotives and rails had to be imported from England; second, that her lack of coal deposits made it necessary to import coal for train fuel. These conditions did not encourage railroad-building.

DID THE POPULATION IN FRANCE GROW RAPIDLY?

While Great Britain's population was growing rapidly after the Industrial Revolution, the population of France was growing very slowly. See the accompanying table. Throughout 50 years (1801–1851) it increased only a little more than 8,000,000. During the same period the population of Great Britain increased 10,000,000, and that of the United States about 17,900,000.

YEAR	POPULATION
1801	27,500,000
1831	32,060,000
1851	35,800,000

Even throughout the past 50 years, while the populations of Great Britain, the United States, Germany, and Japan have increased by great amounts, that of France has remained almost stationary.

The growth of cities in France

Look at the accompanying table. Did French people crowd into cities as the English and the Americans did? Do you think that cities were growing larger, towns were growing into cities, and villages into towns? So they were, but very slowly. It is true that France had long had a few large cities. Even in the Middle Ages Paris was a city of several hundred thousand. By 1801 the population of Paris had risen to 548,000. Only London was larger then. Marseille and Lyon had over 100,000 people, while Bordeaux, Rouen, and Nantes had between 75,000 and 100,000. All these cities were old, and famous for their trade. Marseille and Bordeaux were seaports, whose trade had caused a gradual steady growth of population.

RURAL AND URBAN POPULATION, 1801 AND 1851

Year	Per Cent of Population on Farms and in Villages	Per Cent of Population in Towns and Cities over 2000
1801	79.5	20.5
1851	74.5	25.5

The table shows you, however, that there was very little movement of people to the cities. In 1851 three fourths of the French people were still living in the country. But by that time the proportion of the English people living in cities was increasing very rapidly. The same thing was true in the eastern part of the United States — people were already moving into towns and cities. Not so in France, however.

WAS FRANCE, LIKE ENGLAND, COMING TO DEPEND UPON THE OUTSIDE WORLD?

France was a fairly self-sufficient country until machine manufacturing became widespread. Her farmers produced most of the food needed by the city people as well as by themselves. Until 1850 France depended less upon the outside world than did England or the United States.

Nevertheless, between 1820 and 1844 the amount of goods imported into France almost tripled. French imports, however, were very different from those of England. France did not need to buy food from her neighbors. In fact, foodstuffs like butter, poultry, fruits, and vegetables were exported from France.

One fourth of the people were engaged in manufacturing. Those people needed raw materials. They needed cotton, for example, from which to spin yarn, machines on which to weave cloth, and coal to run their factories. Thus France depended upon other parts of the world for cotton, machines, coal, and for some raw silk.

YEARLY AVERAGE VALUE OF GOODS IMPORTED FROM OTHER COUNTRIES	
1820–1824	$77,600,000
1840–1844	$220,675,000

With the aid of these imported materials France was developing the manufacturing of fine cloth of all kinds, the making of garments, porcelain, furniture, and of luxuries such as gloves, clocks, and perfumes. However, all the processes in making these goods could not be performed by machines. Much handicraft also was required.

So between 1800 and 1850 France remained an agricultural country in which craftsmanship was still important. There was a slow industrial development. Coal was being mined to some extent. Iron was being manufactured in large quantities. A few lines of railroad were being laid from Paris. Although the Industrial Revolution had been much delayed, it was gradually bringing about changes in many parts of France.

AFTER 1850 MACHINE INDUSTRIES DEVELOPED RAPIDLY IN FRANCE

By 1850 the Industrial Revolution had taken a firm grasp on France. Between 1852 and 1912 the number of industrial establishments in France increased tenfold (see figure 73). In machine industries water power was replaced by steam power to a great extent (see figure 74).

An example of the French steel industry

However, another more important development took place — a large coal and iron industry grew up in northern and eastern France. Note the black areas on figure 99 near the border between France and Germany. This section of France is one of the richest iron regions of all Europe. The American traveler on first seeing it explains, perhaps, "It looks just like Pittsburgh!" Like Pittsburgh it is, especially at the place called *Le Creusot* (the crucible, or melting-pot). The name sounds rather interesting; let us look at it more closely.

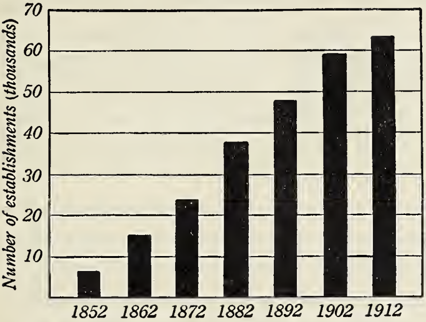


FIG. 73. Increase in the number of industrial establishments in France, 1852–1912

This section is well named. It is a deep bowl, like a mighty crucible, dropped in hills eight miles northwest of Lyon. The hills guard it well, and under the highest of them is a rich treasure in iron. Seven hundred years ago iron was first found in this bowl-like region. A foundry was built in 1774. Later a glass-works was established. This marked the birth of a new industry.

By 1782 the crucible was called the Royal Foundry. It was owned by the king, and at his command ironmasters turned out lovely lacy iron grills to ornament the palace at Versailles.

The French Revolution came in 1789. A few years later Napoleon became emperor, and Le Creusot was used to make iron guns for his army. During this time some of the old French industries perished. For a time after this it seemed as if the iron-works would go too. Rust and mold covered the great iron furnaces.

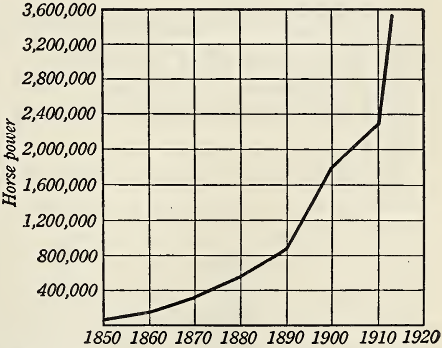


FIG. 74. Increase in steam power used in industry in France, 1850–1912

Two brothers, ironmasters of Lorraine, saved Le Creusot. When they learned of the plight of the Royal Foundry, they bought it from the government, and once more the business began to flourish as it had done in earlier times.

Eugene Schneider, one of the brothers, dreamed of making steam engines. He knew that engines were transforming Great Britain into a wealthy manufacturing country. Schneider wanted France to follow her neighbor's example. He wanted steel steamships to sail under the French flag. He wanted railways to tie together all parts of France. But he knew that locomotives and trains had to be brought in from England.

Schneider thought that with Le Creusot he could make France independent of English machinery. In 1833 he made what is regarded as the first French locomotive. Later, steel rails came from the crucible, and shortly the new railways bound Le Creusot to the rest of France, especially to the mines near Lens, and to those in the Saar and the Ruhr districts. They were soon to bind together Paris and the other French cities, and Paris and the rest of Europe.

Since that time many locomotives have come from the crucible. Between 1919 and 1922 one new locomotive was being turned out each day.

If you have ever inspected the inside of a locomotive, you know what a complicated thing it is. It is an accomplishment for any company to turn out a locomotive a day, but the high quality of Le Creusot's product makes this accomplishment even greater.

Making locomotives is enough in itself for one factory to handle. But Le Creusot is not satisfied with that alone. In addition it is a great white-hot crucible where iron ore is turned into pig iron, and pig iron into ingot steel. This steel is used not only for locomotives but also for steel railroad cars and coaches, motor trucks, taxicabs, tractors, and machinery. Even in our industrial section in Pennsylvania there is no finer steel plant than this one in France.

Though wonderful, Le Creusot is of course not the only steel plant in France. There are other great steel centers. In 1926 France produced more steel than Great Britain, but only about one sixth as much as the United States.

France does mine large quantities of iron, however. After 1870 the increase was rapid. Just before the World War 20,000,000 tons of iron ore a year were taken from the ground.

Tons of Coal Mined		
Year	France	United States
1865	11,840,000	24,790,000
1885	19,510,000	112,180,000
1905	36,050,000	351,120,000
1913	45,020,000	569,950,000

Notice the two accompanying tables for coal and pig iron. They give you a very good idea of how iron manufacture depends upon coal and of how difficult it is for a country poor in coal to become a great iron-refiner or a steel-manufacturer.

There is a great increase shown in the figures of both tables. Note the striking correspondence between the increase of coal production and the rise of iron production in each country. Now compare the figures of pig-iron production in France since 1910 with those of the United Kingdom, Germany, and Russia (see figure 75). Note, furthermore, that, in spite of France's small coal resources, the amount of iron ore smelted in France has increased steadily from 1915 to 1925, whereas the amount of pig iron produced in the United Kingdom and in Germany has decreased.

Tons of Pig Iron Produced		
Year	France	United States
1865	1,290,000	832,000
1885	1,630,000	4,044,000
1905	3,077,000	22,992,000
1913	5,126,000	30,966,000

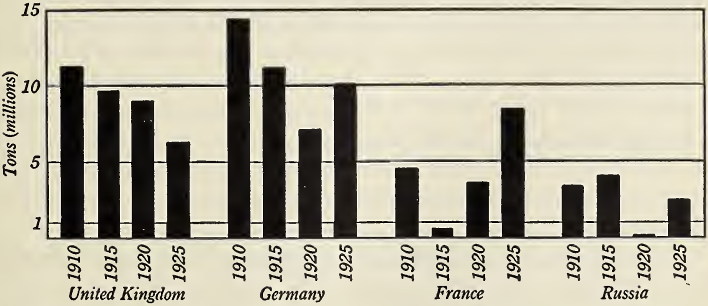


Fig. 75. Comparison of the production of pig iron in the United Kingdom, Germany, France, and Russia, 1910–1925

AFTER 1850 TRANSPORTATION IMPROVED RAPIDLY

As France began to manufacture by machinery, rivers were dredged more deeply and docks were built, new canals were dug and old ones were deepened, until today the system of rivers and canals in France is so perfect that goods can be carried entirely by water from east to west and from north to south.

There are over 4000 miles of navigable rivers and over 3000 miles of canals in France. These canals are joined in such a fashion as to form a very complete network over France. The rivers are busy places, with thousands of freight boats of many kinds going up and down. The French, like the Germans, have made much better use of their waterways than we Americans have of ours. They do not have so many automobiles and motor trucks, but they do use the rivers and canals. In this connection do not forget that water transportation is much cheaper than land transportation, especially for very heavy or very bulky merchandise.

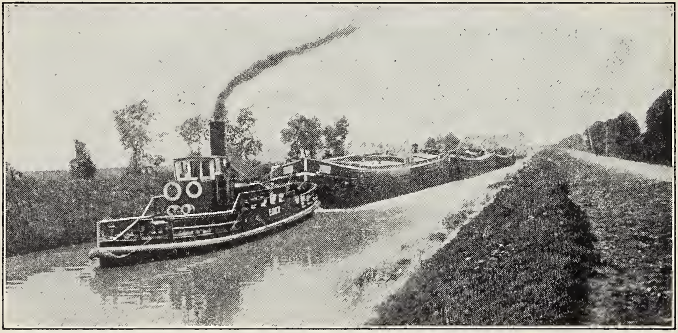


FIG. 76. Canals like this are to be found all over France. The total mileage of French canals is about as great as the distance from New York to San Francisco — 3000 miles

If you look at the map of figure 148, you see that France also has many miles of railways. After 1850 the plan for a national system of railways radiating from Paris was carried out. Every principal French city is connected by rail with Paris, and Paris in turn is connected with every European capital. Lines of railway run out to Amsterdam, Berlin, Vienna, Rome, Madrid, and Constantinople.

Today France has a greater mileage than the United States in proportion to her area. Although France is only about one fourteenth as large as our country, it has one tenth as many miles of railways. England, however, has more miles of railways in proportion to her size than France. Why do you think this is? Is it because France is less industrialized than England?

Towns and Cities increased in Size

We have learned that wherever machine industries grow, transportation improves and cities become more populous. We found that to be true in England. We found that it was true in the United States. Let us see what happened in France, whether it was also true there.

Today in France there is a somewhat smaller proportion of the people living on the farms and cultivating the land than there was 50 years ago. The following figures show how the people of France gradually left the country for the cities:

1872 70 per cent of the population was rural (living in towns under 2000).
1926 51 per cent of the population was rural.

In the 54 years between 1872 and 1926 the percentage of people living in the country dropped 19 per cent. How do these proportions compare with the percentages for the United States during corresponding years?

Let us look at one example of how French cities grew with the coming of machines. Lyon, for many years the center of the silk industry, is a good illustration.

Lyon is beautifully situated. It is a city of bridges, for within its limits the Rhône and the Saône rivers unite. The rivers run parallel for some three miles, inclosing a long tongue of land, before they join. On this narrow peninsula the business section of Lyon is built. To the north hills look down on Lyon. To the east stretches a broad rolling plain.

For many years Lyon has been a very important silk center. Today Milan, Italy, is its only rival on the Continent. For many years, however, Lyon wanted to broaden the occupations of its people; therefore metal-working was encouraged, and today factories turn out many kinds of metal products. The largest automobile factory in France is in Lyon. There are great shops also for the repair and construction of railroad cars and locomotives. At the present time Lyon is a busy industrial city.

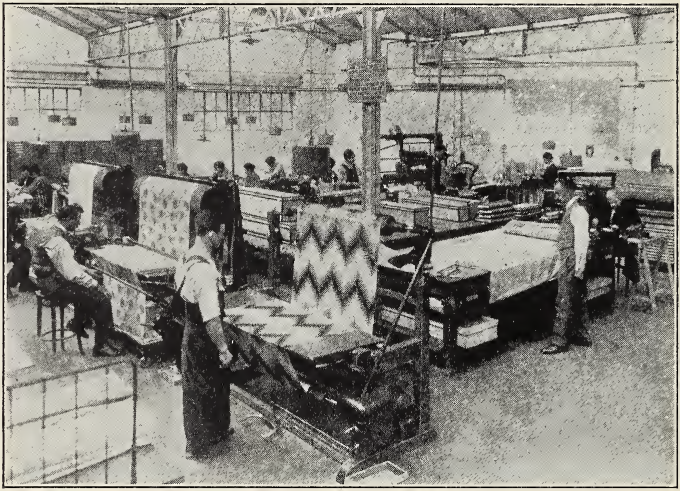


Fig. 77. A silk factory in Lyon, one of the greatest silk-manufacturing cities of the world

"The one thing Lyon lacks," one of its mayors once said, "is a good harbor." In rainy seasons boats can go up the Rhône River from the Mediterranean at least as far as Lyon. However, the Rhône is a somewhat uncertain river. In the spring it floods, so that its dikes can barely hold it in check. During the rest of the year it sinks very low and becomes so shallow that boats can hardly pass.

Lyon plans to remedy that defect, however. A large harbor and many docks are planned to take care of the vast amount of shipping. It will take careful engineering to complete them.

DID THE INDUSTRIAL REVOLUTION CHANGE AGRICULTURE IN FRANCE?

We have said a great deal about agriculture in France, but we have mentioned only hand farming. What about the use of machines in agriculture?

Today the French peasants, like the American farmers, raise a great deal of wheat, oats, rye, barley, and corn. Throughout France one sees mile after mile of well-kept wheat farms. One fourth of the farm land of France is sown to wheat. These crops are very well adapted to machine agriculture.

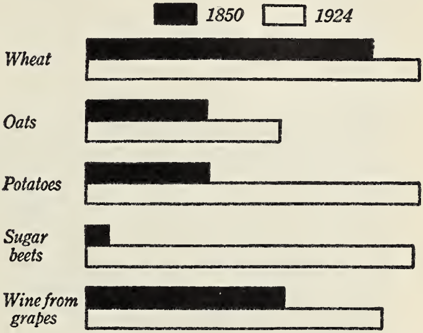


FIG. 78. Increase of agricultural production in France, 1850–1924

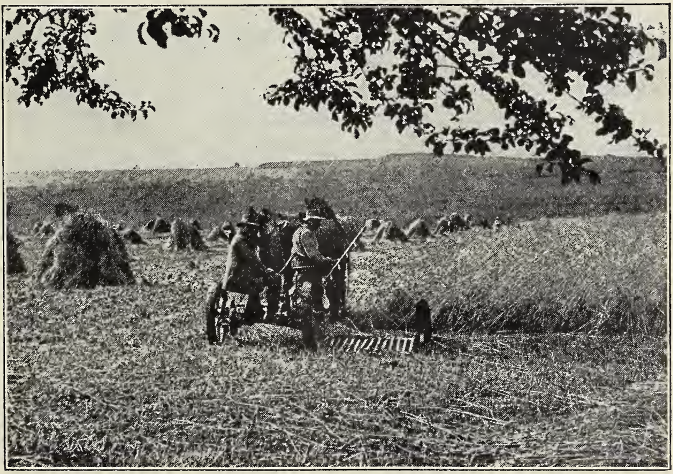


FIG. 79. A rye field of France. While the machine shown in the picture is not drawn by a gasoline tractor such as one often sees in the grain-producing regions of the United States, it is a great improvement over hand methods

In the United States, as we have learned, there was a great change in farming when machines and engines were introduced about 1850. On the large farms of the Middle West tractors are harnessed to plows, to harrows, to planters, to cultivators, and to threshers. Thus the great grain crops of our country are produced. It was not until after 1890, however, that French farmers began to use machines. After that time planting, cultivating, and harvesting machines were introduced. Many farmers abandoned their old plows, sickles, scythes, and flails for the labor-saving machines. The table shows the extent to which they were adopted between 1892 and 1908 in one district of France.

NUMBER OF FARM MACHINES USED IN ONE DISTRICT OF FRANCE

Year	Mowing Machines	Reapers	Reapers and Binders
1892	450	180	60
1908	15,000	25,000	1,200

Many of the crops of France must be raised by hand

To get his living from the soil, each French peasant must obtain as good a crop as he can from his little area of land; so there is much "intensive farming" in France. That is, there are many truck gardens where a great variety of vegetables and fruits is grown. This kind of farming does not need machinery, but it does need constant care and much hand work.

The raising of grapes is a good example of one of the most important farm industries of France. France is one of the greatest wine-producing and wine-consuming countries in the world. The southern and eastern coast regions are the best grape districts, although there are vineyards almost everywhere.

Cultivating vines is a special kind of farming. The vines have to be carefully trained by hand. When the crop is ripe, the grapes are picked. They are carried in great baskets to vats, where the juice is squeezed from them into barrels. These are stored away until the wine is ready. A French peasant can live very well without much water or meat, but without wine — never!

In old times the juice was pressed from the grapes by treading on them, and this old method is still used by peasants who make their own wine. There are also factories where the juice is pressed from the grapes by great machines.

For years before refrigeration was used gardeners had to live near the city to which they sent their fresh foods. They had to be near the public market where they sold their fruits and vegetables. When railways and automobile trucks and refrigeration became common, it was possible to send these perishable foods long distances. Wealthy people all over Europe were eager to buy French garden truck. From Brittany, in western France, fresh vegetables can now be carried to Berlin, Geneva, Amsterdam, and Bruges. Strawberries, prunes, apples, and other fruits from the eastern Alpine section of France are shipped all over Europe, and even to the United States.

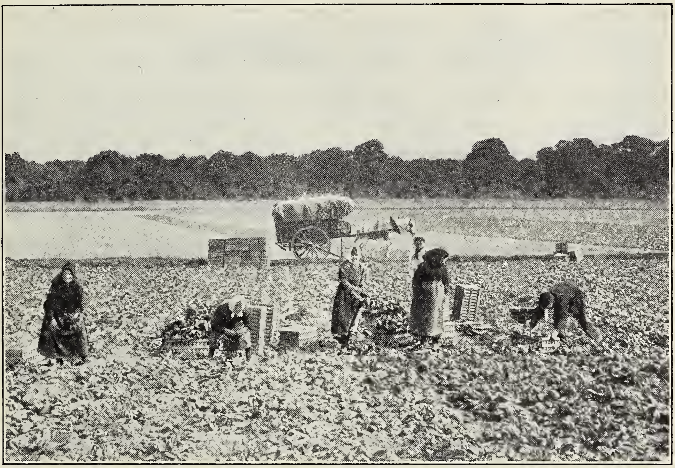


FIG. 80. No machines have yet been invented for much of the work on a truck farm

In France today many goods are still produced by skilled craftsmen

We have learned that while France has industrialized in the same way as have both the United States and Great Britain, she has not industrialized to the same extent. More than half of her people still get their living on farms.

Many of those who live in towns, however, are not in factories or stores. Many are still handicraftsmen. This situation is unusual because in other countries where there is machine manufacturing the craftsmen have practically disappeared. In the United States, as we know, there is very little handicraft. In England machine work has almost entirely replaced hand work. In France, however, machines have not driven out the craftsmen, who make a large part of France's goods.

Like the artisans of the Middle Ages and those of India today, the craftsmen of France are greatly interested in their work. They like to work with their hands. They do not care so much about producing huge quantities as do the manufacturers in the United States or in England. They care more about making a few individual products. The very fact that the work of the craftsmen is not done on a large scale adds to its value. Almost everyone prefers to have something that is handmade and unlike anything else of its kind.

A story is told which illustrates this love of the French craftsmen for their work. A certain Frenchman with his family made a very exquisite kind of perfume. They did not make much of it in any one year, but what they made was of fine quality.

An American visiting them said: "But look here. Let me lend you a little money. Hire some people. Do as I show you, and soon you will be able to turn out a big quantity of this perfume. It will sell everywhere. You will get rich."

"Then what should I do?" asked the Frenchman.

The American explained that the Frenchman would be the owner and the manager. He could see that the other people performed their work. He wouldn't need to do anything at all if he didn't want to.

The Frenchman shook his head. "I'd rather make my perfume myself," he said.

So today many of the manufactures of France are not measured in 1000-ton quantities, but they have a world-wide reputation for quality of workmanship. Enter a little shop in Paris or in any of the smaller towns of the provinces. Behind the main room is the workroom where everything is made. Of course, most of the things are of a kind that can be made from start to finish in small shops — such articles as clothing, bags, jewelry, lingerie, candies and confections, and metal and leather goods.

In 1925 the chief exports of France were silk textiles, cotton goods, clothing, automobiles, iron and steel, chemical products, rubber goods, wine, soaps and perfumes, table fruits, glass, etc. In France many of these manufactures do not lend themselves readily to large-scale machine production. The finishing of many of these articles depends, as in the days before the machine, on the skill of individual craftsmen.

Thus handicrafts have continued in France to the present time. Many a workman still lives today with his own factory and retail store right in his house, as once did the craftsmen of England and the United States. The French have not formed so many big organizations and have not developed industries on so large a scale as have the English and the Americans.

Today France, although changing, still maintains many of the same ways of living that she has practiced for 1000 years. Will she continue to do so?

Summary: France today, then, is still a country of many small craftsmen, shopkeepers, and farmers

We have now studied the industrial and agricultural development of France and of England. Although they are of almost the same population, we have found that the growth of the two countries has been very different.

1. England developed machine industry rapidly; France, much more slowly.
2. A vast proportion of the English people moved into cities, working in factories; more than half of the French people stayed on farms. Many of those who moved into cities continued to engage in craft occupations.
3. England has tended toward mass production of goods; France, toward the "quality" production of goods.
4. No matter whether a country industrializes or not, the getting of sufficient food remains a problem. The amount of land available for agricultural purposes per person is much less in England than in France, and most of the English people are engaged in pursuits other than the raising of food. A large proportion of the French people still raise a part of their own food. Therefore, while England depends upon other countries and regions for food, France is almost self-sufficient.
5. France, although not so much as England, has become a world trading nation.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*Allen, Nellie B. Europe. Ginn and Company, Boston, 1928. Includes a good portrayal of some of France's industries: fishing, pp. 290–295; the French peasant, pp. 333–334; silk manufacture, pp. 357–363; perfumes, pp. 389–393.

Carpenter, Frank G. Europe. American Book Company, New York, 1924. A good reference. See sections on rural France and on commerce and manufacturing.

*Clark, Vinnie B. Europe, pp. 202–233. Silver, Burdett and Company, New York, 1925.

*Finnemore, John, Crescioli, E., and others. France (Peeps at Many Lands Series). The Macmillan Company, New York, 1915. One of the best descriptions of ways of living in France.

Marshall, H. E. A History of France. George H. Doran Company, New York, 1925. A well-written and well-illustrated book, largely devoted to military and political affairs.

Mitton, G. E., and Williams, Margery. London and Paris. The Macmillan Company, New York, 1921. A well-written account of one of the most interesting of the world's cities — Paris.

Osgood, Ellen L. A History of Industry, pp. 306–308. Ginn and Company, Boston, 1921. France from 1815 to 1924.

*Robinson, J. H., and Beard, C. A. The Development of Modern Europe. Ginn and Company, Boston, 1907–1918. For a short account of the Industrial Revolution in France see Vol. II, pp. 49–52.

Magazine Articles

"Across the Midi in a Canoe," *National Geographic Magazine*, August, 1927, pp. 127–167.

"Camargue, the Cowboy Country of Southern France," *National Geographic Magazine*, July, 1922, pp. 1–34.

"Carnival Days on the Riviera," *National Geographic Magazine*, October, 1926, pp. 467–501.

"In Smiling Alsace, where France has resumed Sway," *National Geographic Magazine*, August, 1927, pp. 168–176.

"Our Friends, the French," *National Geographic Magazine*, November, 1918, pp. 345–377.

*"Scenes from France," *National Geographic Magazine*, July, 1921, pp. 29–44.

*"Special France Section," *Literary Digest*, February 11, 1922, pp. 22–83.

"The France we do not Know," *Literary Digest*, October 13, 1923, pp. 50–52.

*"Through the Back Doors of France," *National Geographic Magazine*, July, 1923, pp. 1–52.

CHAPTER VIII

HOW FRANCE BUILT THE SECOND LARGEST EMPIRE IN THE WORLD

Dinner was over in the Paola House, and several traveling salesmen were cooling off in the rustic chairs in front of the hotel. The argument which had started over England's trade, long before the evening meal, had spun out through various courses and was now being continued about French trade, in the dusk of approaching evening.

"The French Republic! What do you mean — republic? France is an empire. In fact, it has the greatest *colonial* empire on earth. It actually reaches around the world!"

The speaker dropped his chair with a thud as if to emphasize the point he was making.

"Why, certainly you must be wrong," murmured a more retiring member of the group. "France is a republic. She elects a president just as we do in the United States. What about her Chamber of Deputies and her Senate?"

"Oh, of course, France is *called* a republic. She has a president, and her government is that of a republic. But we ought to speak of the French empire instead of the republic of France, just the same!"

"How do you make that out?" came a question in the midst of several objections from the group.

"Why, simply because she controls land all over the world. She owns land in *Indo-China* and in *northern* and *central Africa.* The great island of *Madagascar* is hers. A great portion of *Siam* is under her flag. *Morocco* and *Syria* salute the French tricolor."

"By calling France an 'empire,' then, you mean just that she owns or controls lands outside her own boundaries? Is that it?"

"Sure, that's it, and that's what she does. Why, do you gentlemen know, there are more people living in French colonies than in France itself? You don't believe it? I can give you the figures for 1926. There are more than 104,000,000 people living in the entire French empire." (How does this compare with the population of the United States?) "Only about 40,000,000 are living in France."

"He's right," spoke up a quiet, elderly man, who had been amused at the heated conversation of the evening. "I have a recent copy of *Foreign Affairs* here which happens to have a very good article on just what you are talking about, 'Greater France.'"

"This map will interest you," he said as he held up the magazine so that the company could see the extent of the French empire. (See figure 81.)

"Look here. See how small France herself is compared to her possessions! She isn't one tenth as large as the whole empire."

"One tenth!" exclaimed a young engineer, who had been studying the map intently. "Why, she isn't one twenty-fifth as large, or I lose my bet."

"She certainly is a 'world empire'! Yes, sir, over 4,000,000 square miles in all. More territory than in the United States. Second only to England in the amount of foreign land she controls."

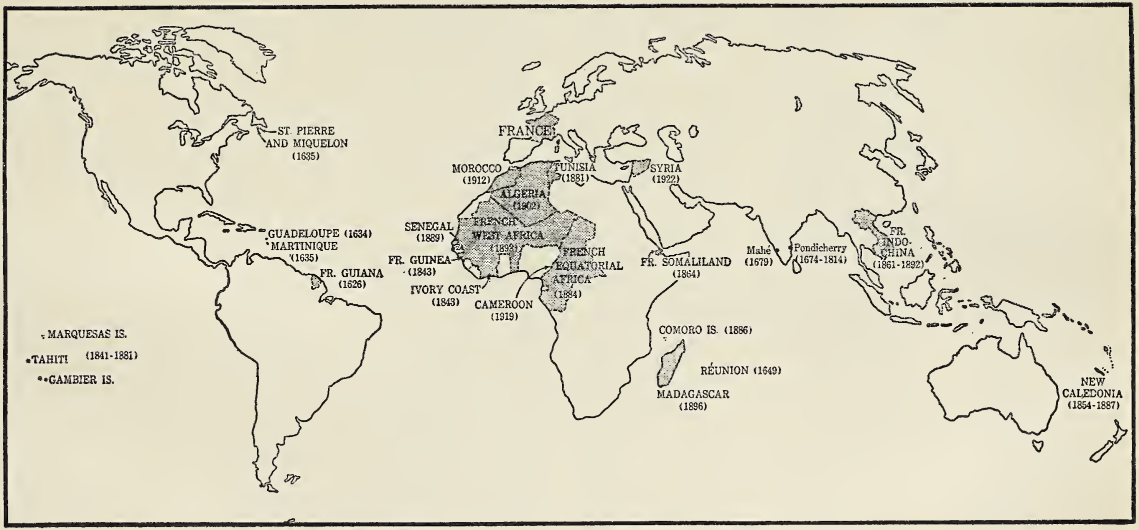
When did France build up her empire? How did she build it? Why did she build it? Was it connected with her industrial development? These are the questions which we shall try to answer.

If we were to study carefully the history of why France took each of her colonies, we should find that the reasons were much like those of England. One colony was rich in raw materials. Another was a good market for French manufactures. A third had good prospects for the investment of French capital. Another was on an important trade route.

WHEN WERE THE COLONIES ADDED TO THE FRENCH EMPIRE?

On page 198 is a list of the lands included in the French empire and the dates when they became part of it.

Notice that the dates extend over a long period of time. The earliest colony was taken in the early 1600's; the latest was added in 1922. Almost 300 years of empire-building!



ST. PIERRE AND MIQUELON (1635)
GUADELOUPE (1634)
MARTINIQUE (1635)
FR. GUIANA (1626)
MARQUESAS IS.
TAHITI (1841-1881)
GAMBIER IS.
FRANCE
MOROCCO (1912)
TUNISIA (1881)
SYRIA (1922)
ALGERIA (1902)
SENEGAL (1889)
FRENCH WEST AFRICA (1893)
FR. GUINEA (1843)
IVORY COAST (1843)
CAMEROON (1919)
FRENCH EQUATORIAL AFRICA (1884)
FR. SOMALILAND (1864)
Mahé (1679)
Pondicherry (1674-1814)
FR. INDO-CHINA (1861-1892)
COMORO IS. (1886)
RÉUNION (1649)
MADAGASCAR (1896)
NEW CALEDONIA (1854-1887)

Fig. 81. Map of the world, showing the French empire

LANDS INCLUDED IN THE FRENCH EMPIRE

AMERICA	
Guadeloupe	1634
Saint Pierre and Miquelon	1635
Martinique	1645
Guiana	1626
AFRICA	
Algeria Sahara	1830–1902
Tunisia	1881
Senegal	1637–1889
French Sudan Upper Volta	1893
Guinea	1843
Morocco	1912
Ivory Coast	1843
Dahomey	1893
Mauretania	1893
Niger	1912
Congo	1884
Cameroon Togo	1922
Réunion	1649
Madagascar	1643–1896
Comoro Islands	1846
French Somaliland	1864
ASIA	
India (French)	1674–1814
Indo-China	1861–1892
Syria	1922
OCEANIA	
New Caledonia	1854–1887
Tahiti	1841–1881

THREE HUNDRED YEARS AGO FRANCE TRIED TO SPREAD HER EMPIRE OVER THE NEW WORLD

You remember that England first began to build her empire in America in the 1600's. Throughout those first years of empire-building France was England's greatest rival. French explorers and traders met Englishmen at every turn. Men of both countries raced to establish colonies and to claim land for their kings.

While England was establishing colonies along the Atlantic coast of North America, the French were building trading posts and forts west of the Appalachian Mountains and in what is now Canada. The French colonies were not so strong as the English, however. After many years of bitter rivalry on American soil and of war in Europe, France gave up her rights in Canada to England.[1]

At the time that the colonies were forming in Canada, La Salle and his brave French companions were exploring the Mississippi and Ohio valleys. There they claimed much territory for France. England eventually took much of it and added it to her colonies.

France held "Louisiana," however. This was then a great territory covering most of the west side of the Mississippi Valley.

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[1] Longfellow's *Evangeline* tells something of the life of the early French Canadian settlers, and how they were driven from their homes by the English.

In 1803 the French ruler, Napoleon, was very busy conquering Europe. This task was an expensive one, and there was never enough money in the French treasury for the wars. So Napoleon agreed to sell the great tract of land, "Louisiana," to the United States for the sum of $15,000,000. That was the end of the old French empire in North America.

Today Saint Pierre and Miquelon, two islands in the great fishing region off the coast of Newfoundland, are all that remain. Today in the West Indies and South America, Martinique, Guadeloupe, and French Guiana are under French control; but the rich island of Haiti, which she owned for a time, was lost through revolution.

France attempted to build an Empire in India

In India, as well as in North America, France lost her foothold. In the 1600's, along with the Portuguese and the Dutch, the French traders had competed with the English East India Company. Finally they were forced to give way to England. Today there remains but little evidence of the French attempt at empire-building in India. There are a few French ports and some other cities with French names in this country now controlled by Great Britain. One port, Pondicherry, is today the center of the French trade in India. It is still a valuable possession. But all of France's possessions in India amount to only 196 square miles.

Throughout the 1700's, as you will notice on the list of colonies, France added almost nothing to her empire. During those years constant wars at home prevented expansion. By the time the wars were ended France had actually lost almost all the empire she had begun to build.

After 1800 France began building an Empire in Africa

1. Algeria

In the 1800's, however, conditions at home became better, and some French business men began again to think seriously of colonies and trade. Algeria in northern Africa, just across the

Mediterranean Sea, looked promising. It is only a short distance from Marseille, one of the best French ports.

For many years a few of the more adventurous French traders had called at the town of Algiers on the African coast at their own great risk. During the later 1700's and early 1800's there were many pirates on the Mediterranean, as you learned in an earlier chapter. They were fierce, dark men most of whom came from Algiers. Any European merchantman was fair game for their swift ships. Once captured, the European crews were taken to Algiers, where they were thrown into prison. Here they waited months until their families or friends at home sent money to ransom them. If the money did not arrive, the unfortunate prisoners were sold as slaves.

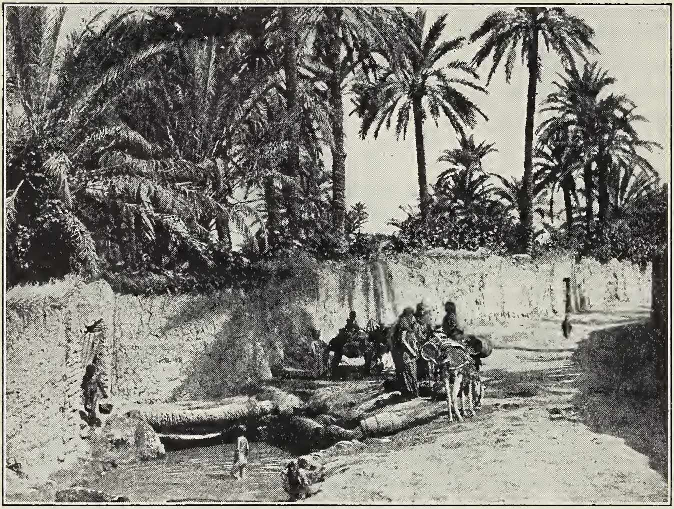

FIG. 82. Except for the coastal regions Algeria is largely a country of mountains and deserts. Oases, such as this, supply food and drink to the traveler

From time to time the various European nations and the United States tried to stop the robbery by these Algerian "corsairs," as the pirates were called. France was particularly eager to be rid of them, for pirate ships had actually landed at French ports and plundered towns along the Mediterranean coast of France.

As late as 1830 the ships of the Mediterranean were still being terrorized. In that year events took place that led to the wiping out of the pirates and the beginning of the building of France's new empire. The French consul was arguing one day with the Dey (ruler) of Algeria about some grain. The Dey lost his temper and slapped the Frenchman's face. At the same time a French vessel was fired upon in the harbor by Algerian guns. Those were insults which France was eager to avenge.

French soldiers were hurried to Africa. They conquered Algiers, the capital of Algeria, and marched through the country, driving out the native rulers. After this had been done, the French government was not at all sure what should be its next move: the problem was whether to stay and govern Algeria as French territory or merely to leave troops and warships in the harbor to subdue pirates.

At length France decided that halfway measures would not do. She would make Algeria part of French territory. It took the French seventeen years to do it. But in 1847 Algeria was really a French colony.

Though the country was annexed, peace was not restored. During the next 50 years there were many uprisings. The desert tribes were fierce, and hard to conquer. In 1841 a rebellion broke out and was put down. Between 1864 and 1872 there was almost constant trouble. In 1881 there was another rebellion. Even as late as 1927 the French government was still having difficulty with some of the tribesmen.

The taking of one colony led to others in Africa.

2. Tunisia and Sahara

On the north shore of Africa, not far from Algeria, is another small country much like it, called Tunisia. Tunisia too was the home of many pirates. In order to keep Algeria quiet the French decided to seize Tunisia. This added another African region to the French empire.

Then, step by step, during the next 30 years, French soldiers carried the French flag to the heart of Africa. In 1904 the French empire extended over much of the Sahara Desert.

Not only was a large part of the Sahara claimed, but some of the Sudan and a large part of the central jungles as well. These areas became known as French West Africa and French Equatorial Africa. The conquest of these new countries of black men was quite different from the warfare with desert tribes of the Sahara or with the warlike Arabs of the north coast. Every little village had to be seized separately. The blacks were generally uncivilized. They lived scattered over the vast central African territory. Often deserts, jungles, or mountains had to be crossed with great difficulty before the soldiers could go from the conquest of one tribe to that of another. The natives did not lead settled, organized lives, and after control had been gained it was hard to keep.

This new empire, won in the later years of the 1800's, was immense in land area. From Algeria south to the mouth of the Congo River lay a vast stretch of about 1500 miles. The entire territory was conquered. It is about eleven times as large as France itself.

What is this desert that makes up such a large part of France's domain?

From afar the Sahara looks like a great tawny-colored plain, stretching forever into distance. Close at hand the sand is very colorful: sometimes bright yellow, sometimes brown, sometimes burnt orange. Much of what seems to be sand is really coarse rock, and everywhere the ground appears to heave and swell. The sand is fine and soft and exceedingly dry. In the heat of the noon sun it is burning to the touch.

Far off on the desert one can sometimes see a tiny spot of green — palm trees standing as if painted against the bright blue sky. This welcome bit of life is in reality an island of vegetation in the great waste of sand. It is an oasis, the goal of weary caravans. Here is a spring which the sun has not dried. In the moisture from the spring a few palms and a patch of grass are growing. Sometimes even a small wheat field is seen. The oases give proof of the fact that the desert needs only water to make it fertile.

Of course there are few houses on the desert. There are no towns and trees, except at the great oases. There is no shelter from the fierce, blinding sunlight. The rays of the sun beat down endlessly upon the sand, which reflects back their heat. Nowhere can the tired, burning eyes of the traveler find comfort.

At night the air suddenly turns cool,— even cold,— but the sand never cools completely.

Once in a great while a heavy rainstorm sweeps the desert. Almost overnight plants spring from the moistened sand. Perhaps their seeds have been dropped by birds, or have fallen from a camel caravan as it passed. But too long a time elapses between rainfalls — the frail vegetation soon parches and dies. Dried wisps of grass are blown away by the wind, and the desert is again a great waste.

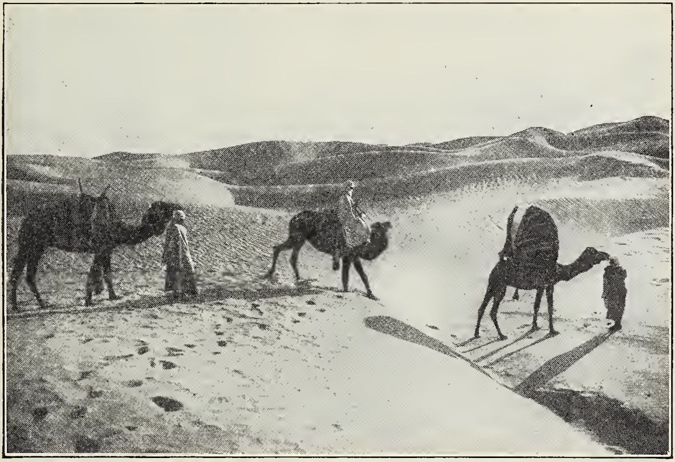

Fig. 83. South of Algeria lies the Sahara. Wandering tribes of Arabs travel its sandy hills from oasis to oasis under a scorching sun

Routes across the desert are not easy to find. There are almost no roads and few railroads. Terrific windstorms come up without a moment's warning, blowing the sand about until the whole country is transformed into new shapes and patterns. Then men may easily lose their way from oasis to oasis, and a terrible fate may befall them unless they stumble upon an oasis or a wandering Bedouin tribe.

These tribes, which are few in numbers, are almost the only inhabitants of the desert. The tribesmen spend their lives wandering over the desert with herds of camels from oasis to oasis, and many nights they pitch their tents in the midst of this vast area of waste land.

3. Morocco followed Algeria, Tunisia, French Equatorial Africa, and French West Africa into the French empire

After Algeria, Tunisia, French Equatorial Africa, and French West Africa had all been made French colonies, the home government thought it might be well to make continuous the French territory across northern Africa. So France took the part of Morocco which lies just west of Algeria.

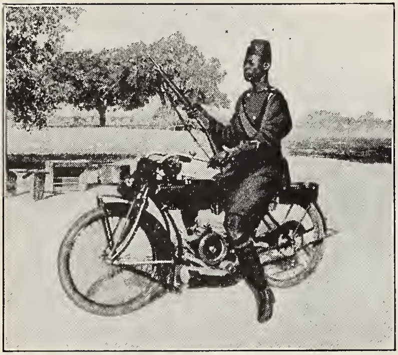

Fig. 84. One of Morocco's native policemen. Today many of the native people of France's empire help her to maintain peace in her colonies. This is just as true of many native people in the British Empire

This task was not easy, however, for Spain, Germany, Great Britain, and Italy were opposed to such a plan. However, by giving up claims to some other territories, France finally gained most of Morocco and established a protectorate. This was arranged in 1912 after a dispute which had lasted for years. The other European nations, however, still denied France any special advantage in Moroccan trade.

4. France took Madagascar also

Where is Madagascar? If you do not know, look at the map of figure 81. You will see that although Madagascar is an island, it is larger than France herself.

In 1643, when the French first went into Madagascar, it was a country where the native tribes lived in settled communities. They cultivated the ground without plows and harvested crops of rice. Besides tending their farms the men worked at metal-making. They were proud of their fine chains of gold and silver. The women spun and wove silk and cotton cloth and plaited straw mats and baskets.

The Malagasy, as the native people were called, practiced and believed in witchcraft and sorcery. Throughout the year they had many holidays, when everyone feasted and drank. They were very cruel to their enemies in warfare, but they were known to be kind to their families and respectful to the aged.

The natives resented the coming of the Europeans. Rebellions were frequent until as late as 1895. In that year an expedition of French warships landed troops on the coast. There was a battle, in which the French troops with their firearms easily defeated the natives, and French officers again took control of the land. Madagascar became a protectorate of France, and in 1896 was declared a colony. The graph indicates the value of Madagascar's trade with France.

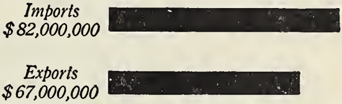

Fig. 85. Madagascar's imports from and exports to France, valued in dollars

Today Madagascar is a valuable French possession. It is a fine place for development and investment. The land is rich in gold and other minerals. Valuable trees, including the rubber tree, grow on the island.

Since 1896 French trade with Madagascar has developed greatly. French engineers came to the island and mined gold in ever increasing quantities. Factories were built for silk and cotton weaving. Sugar-refining mills were built. Soap-making became an industry. The natives began to export rice, liquors, metal ware, gold, coal, hides, rubber, straw hats, coffee, and fertilizer.

French bankers introduced the use of money. Roads were made, and railway tracks laid. Great sums of French money were invested in improving the land.

Today Madagascar is cultivating more than 3,000,000 acres of land, on which great quantities of sugar, coffee, rice, cotton, vanilla, and vegetables are raised. The natives are much more prosperous now, because the French government has taught them to use scientific methods in caring for their forests and farms. Silkworms are grown. Mines are being developed. Railways and telegraph and telephone lines are being built.

France now controls Syria on the Mediterranean

You remember how eager English traders were to control as much as possible of the Mediterranean Sea, and how England added much of this territory along the shore line to her Empire.

If you look carefully at a map of France, you will see how well situated Marseille is for trade both on the Atlantic and on the Mediterranean. Like England, France wanted to have a share in controlling the Mediterranean trade routes. To this end she took a great portion of the northern coast line of Africa — Algeria, Tunisia, and Morocco. But she still wanted some territory on the east coast so as to protect the trade route to French Indo-China.

In 1922, with the permission of the other European nations, France took control of Syria. Look on the map of figure 81 and find just where Syria lies on the Mediterranean.

French Indo-China: how France extended her Empire to Asia

France was already winning vast African holdings during the 1800's, yet she looked still farther for more lands to add to her empire. At the same time that nearly half of Africa was being taken another distant colony was added to the empire.

This is now French Indo-China. In 1850 there was no such place on any map of the world. In the place which is now French Indo-China there was a great territory on the southern Asiatic coast known as Cambodia, Tonkin, Laos, Annam, and Cochinchina.

Why did France want these lands? The answer is the same as in other similar cases — trade.

French Indo-China is a region of rich natural resources. It grows cotton, tobacco, coffee, pepper, palms, sugar, and many other things. It also produces hides and silk. Many metals lie beneath the ground — iron, copper, zinc, tin, and gold.

In the southern part of the peninsula, near the mouth of the Saigon River, is the capital of old Cochinchina, Saigon. This is one of the world's greatest rice ports. Not far from Saigon more than 1,500,000 tons of rice are grown every year. The rich soil also produces fine crops of many kinds of vegetables and tropical fruits. Cattle graze on the highlands far north. In the waters near the coast are many edible fish. Indo-China too is valuable to France.

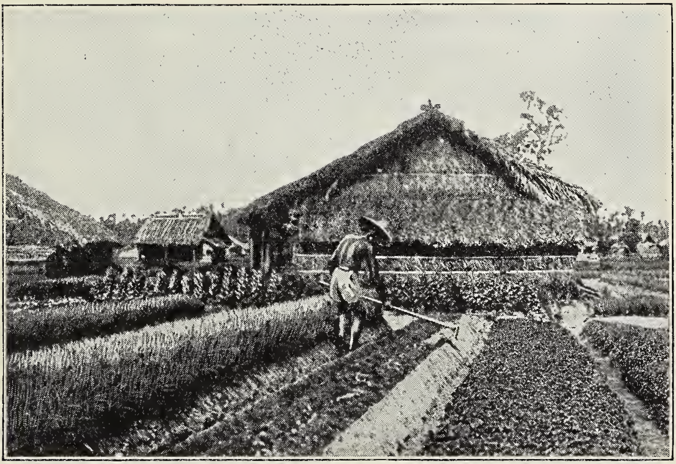

Fig. 86. The natives of Indo-China are learning new agricultural methods from the French. This shows one of their model truck farms near Saigon. French Indo-China is a valuable food-producing region

In the old days Annam was the province north of Cochinchina. There, even today, natives raise silkworms, which spin great quantities of silk. From the raw silk gorgeous fabrics are woven.

Still farther north, in old Tonkin, on the southern border of China, are the great mineral deposits which the French desired. There also are forests of the heavy tropical teakwood. In the spring huge quantities of timber are cut. The logs are carried by elephants to the Mekong River, on which they float down to its mouth. There some of the logs are made into furniture, and some are shipped to foreign lands.

How Tonkin looks to a traveler

In Tonkin there is no severe winter. There is only a rainy season and a dry season. During the rainy season great quantities of rain fall almost every day for months. The rice fields lie flooded. Heavy storms drench the workers in the fields. Knee-deep in the mud, water buffaloes plod along, dragging plows and thus preparing the land for the first spring rice crop. Later the farmers work bent almost double as they take the young plants from the seed beds and set them into the flooded fields.

After the rain comes bright, warm sunlight, which makes the watery fields glitter like great mirrors. The men work in the water, barefooted and barelegged. Their heads are protected against the weather by wide mushroom-shaped straw hats.

On every side are flooded fields and ditches. The women help with the work. They work in pairs, facing each other. All four hands grasp the ropes which are used to lower and lift deep bamboo baskets of water into and out of the ditch. The women work with a steady, continuous rhythm, keeping time to a monotonous chant. Dip, lift, dump — their arms work unceasingly, almost mechanically.

In spite of the fact that two good crops of rice are raised each year by the Tonkinese farmers they earn only about five cents a day. The people live poorly indeed in little villages. Their homes are small, flimsy thatched hovels, which often stand in stagnant water.

The deepest impression which a traveler in Tonkin carries away is one of toil and poverty. The farmers seem all alike. They are tied to the earth, and their labor rewards them poorly.[1]

The city of Hanoi is the capital of French Indo-China

Hanoi seems like a town of the Middle Ages. It is a city of handicrafts. There is a changelessness about it which makes one think he is seeing life today as it has been lived for centuries. Hundreds of years ago people in Hanoi must have been making the same kind of brass ornaments in the same way — round bright trays, pots and kettles, and slim-necked vases of inlaid brass and bronze. These are ranged on shelves or stands in corners, as though they had been there since time unknown. The metal-workers, who are tapping, tapping, with infinite skill and patience, might have been squatting on the floor since the days of Marco Polo, so far are they removed from our twentieth-century ways of working.

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[1] The account of this episode has been adapted from a description by an eyewitness, Gertrude Emerson, in her article "Backwater of Empire in French Indo-China," in *Asia* (New York) for September, 1923, p. 673.

The streets of Hanoi are like departments of a great store. One street is Brass Street. There only brass and bronze things are made and sold. Another is the Street of Tea Ware, where, stacked on low tables which reach out into the street, are tiny teapots, plates, and cups made without handles. Farther along there are Cotton Street, Trunk Street, the Street of Sails, Hat Street, and streets named for many other things. There are streets for everything that is for sale in Tonkin.[1]

These are glimpses of one country which France has added to her empire. You will probably agree that it was a possession well worth having for the sake of its natural resources, trade, and agricultural production.

This valuable and interesting country was independent and almost unknown to Europeans before 1787. No country appeared to want to control the region. However, a few Christian missionaries, some of them French, were living there, and in 1858 the ruler of Annam put some of these missionaries to death. Later he refused to make amends for the deed.

The French government thought that this was a sufficient reason for seizing the land. So in 1861 French troops began to subdue the natives of the southern peninsula, Cochinchina. Afterwards they moved north and west until, in 1884, Cochinchina, Annam, and Tonkin were all under French control.

After 1884 the French added to Indo-China some land taken from Siam. If you look at the map following page 424, you see that Siam is near French Indo-China. It is much the same kind of country, with rich minerals and forests.

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[1] The account of this episode has been adapted from a description by an eyewitness, Gertrude Emerson, in her article "Backwater of Empire in French Indo-China," in *Asia* (New York) for September, 1923, p. 670.

The French business men from French Indo-China wanted permission to work the mines and cut the timber. The king of Siam refused to allow this; so a French fleet set out to compel him to grant permission. Bangkok, the capital city of Siam, was blockaded. Finally the king of Siam had to submit. By 1907 a great slice of eastern Siam had been seized by force and added to the French empire.

The map of Asia shows you the extent of French Indo-China today.

Of How Much Value to France is her Empire?

France, like England, took colonies for several reasons. One reason was in order to aid her business men to trade with every part of the world.

For example, in a recent year French manufacturers of cotton goods sold a third of their goods in Algeria, and large amounts of metal goods and wines were bought there.

French Indo-China is an important customer of French merchants. France sells cotton goods there as well as in Algeria, Tunisia, and Morocco. In recent years the people of Madagascar have bought millions of dollars' worth of goods from French merchants. So these possessions provide good markets for French manufacturers.

The colonies are valuable to France for a second reason: they provide her with many raw materials of which she herself cannot produce enough. Algeria sends oxen and sheep to French cities. French Indo-China sends rice, corn, oxen, rubber, fish, oil, pepper, tea, cotton, silver, zinc, and leather. Madagascar sends great quantities of graphite, hides, vegetables, rice, tanning bark, and raffia.

There is a third reason why France wanted her colonies. French capitalists could invest their money in the colonies, knowing that such investment would yield them a profit. They have laid out plantations of rice, cotton, rubber, and tobacco in French Indo-China and Madagascar. In these colonies there are now millions of acres of well-cultivated farms. Mines have been opened, railways have been built, and travel and shipment of goods by rail are encouraged. All these things make money for French business men whose capital is invested in these lands.

We learned that the British have gradually changed undeveloped regions into fairly industrialized countries by building roads, railways, factories, and plantations. France is doing the same with her possessions. Her colonies are gradually taking on European ways of working and living. Northern Africa is very slowly becoming industrialized. Farming in Madagascar is becoming more scientific. Towns and cities are growing as roads and railways improve.

These influences of Europe upon Asia and Africa are very important. We shall learn more of them later.

Were the French People themselves interested in Acquiring Land?

You remember that in Chapter VII most of the French people were pictured as farmers loving the land, and craftsmen concerned with the quality of their goods. How, then, can we explain the fact that these same Frenchmen, who were content to plow their own little acres, seemed to be eager to seize possessions in out-of-the-way corners of the earth?

If you will glance back through this chapter, you will notice that the French empire is really very young. Except for the early colonies in the New World, which were almost completely lost to France, the empire is hardly 50 years old.

The early empire was the work of the kings and the nobles. They thought that they, as well as the Spaniards, could win fortunes in gold from the New World. If there was much profit from the early colonies, it went right into the pockets of the king and the nobles, and right out again to be spent for luxuries.

After the French Revolution of 1789 the people were little interested in the world outside France. They were busy working their newly won lands. They were developing their little businesses. They did not have time to think of getting colonies across the seas. They did not even want to hear about them. The homeland was the goal of all their thoughts and ambitions.

Even after 1830, when the Industrial Revolution began to change France,— the French peasants showed no interest whatsoever in colonies. As late as 1885 the representatives of the peasants in the French government were not particularly eager to take French Indo-China, and the government finally agreed to its seizure by a margin of only four votes. Scarcely enough votes could be secured to make possible the support of the army which was besieging Tonkin. Yet French Indo-China is a very rich region.

Why were most of the French people so indifferent to colonization and empire-building?

Because the French farmers raised most of their own food. The problem of France was not at all that of England. The English people had to import their food or starve. The French people did not need colonies to feed them.

Another reason why the Frenchman did not share the Englishman's dream of empire was that he did not care to emigrate. He preferred living at home on his little farm or in his shop. Very few Frenchmen have settled in Algeria or in the other French colonies, for the government could not persuade many of them to leave France.

Who in France, then, did want colonies?

It was the wealthy business men of the cities who were engaged in manufacturing. As their businesses grew, their factories needed more and more raw materials. To get these raw materials, which they had to have to feed their machines, they wanted colonies. They also wanted new markets for manufactured goods. Therefore these men talked a great deal about the increasing needs of industry, and they still talk about it today.

Thus France built up an empire second in land area only to Great Britain's. She too traded with the world and became a rival of Great Britain in the modern world, as she was in earlier times.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

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Carpenter, Frank G. Asia. American Book Company, New York, 1897. See the section on Indo-China, pp. 162–170.

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*Finnemore, John, and Forrest, A. S. Morocco (Peeps at Many Lands Series). The Macmillan Company, New York, 1908. An exceptionally good story of this region of the empire.

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Smith, J. Russell. Commerce and Industry, pp. 366–373. Henry Holt and Company, New York, 1916. Excellent maps of wine-producing areas and of waterways.

Stevenson, R. L. An Inland Voyage. Charles Scribner's Sons, New York, 1912. A story of a trip in France.

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*Whitbeck, Ray Hughes. Industrial Geography. American Book Company, New York, 1924. One of the best references on geography. See Chapter XIX (France).

Magazine Articles

*“Across French and Spanish Morocco,” *National Geographic Magazine*, March, 1925, pp. 327–356.

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“In the Sands of the Sahara,” *National Geographic Magazine*, January, 1924, pp. 73–85 (Timbuktu).

“The Coasts of Corsica,” *National Geographic Magazine*, September, 1923, pp. 221–312.

“The Damascus Massacre,” *Literary Digest*, November 14, 1925, pp. 7–9 (Syria).

*“The Land of History's Link,” *National Geographic Magazine*, November, 1919, pp. 437–462 (Syria).

“The White City of Algiers,” *National Geographic Magazine*, February, 1928, pp. 206–232.

*“Through the Great River Trenches of Asia,” *National Geographic Magazine*, August, 1926, pp. 133–186 (Indo-China).

UNIT V

GERMANY: A POWERFUL INDUSTRIAL NATION AND THE CENTER OF EUROPEAN TRADE

GERMANY: A POWERFUL INDUSTRIAL NATION AND THE CENTER OF EUROPEAN TRADE

In the previous chapters we have studied how Great Britain and France changed from weak agricultural countries to powerful industrial countries. We have seen the extent to which each adopted machine manufacturing and built modern means of transportation and communication. We have seen how people left their farms and villages and went to live in cities and towns. We have learned how they came to exchange products with other countries, and how they built up large fleets of merchant vessels to trade with the peoples of the other continents. We have also seen how Great Britain and France each built an empire of large territories and populations in distant parts of the world.

Next we must learn what happened to Germany during the Industrial Revolution. That is the problem to be taken up in Chapters IX and X.

Was Germany, like England, in 1800 a country of large landed estates and growing manufacturing towns and cities? Or was she, like France, a country of small farms, of handicrafts, and of few power-driven factories? Did Germany too become an industrial country? How did her people supply themselves with food? Did they also study science, invent engines and machines, mine coal and iron, and make steel?

These questions we shall discuss in Chapter IX.

We must also know the answer to other questions. We must know whether Germany sent her traders and her trading ships to Asia, Africa, and America to build up a vast system of world trade. Did Germany, like Great Britain and France, acquire colonies in the other continents? These questions we shall answer in Chapter X.

CHAPTER IX

HOW GERMANY BECAME A GREAT INDUSTRIAL NATION

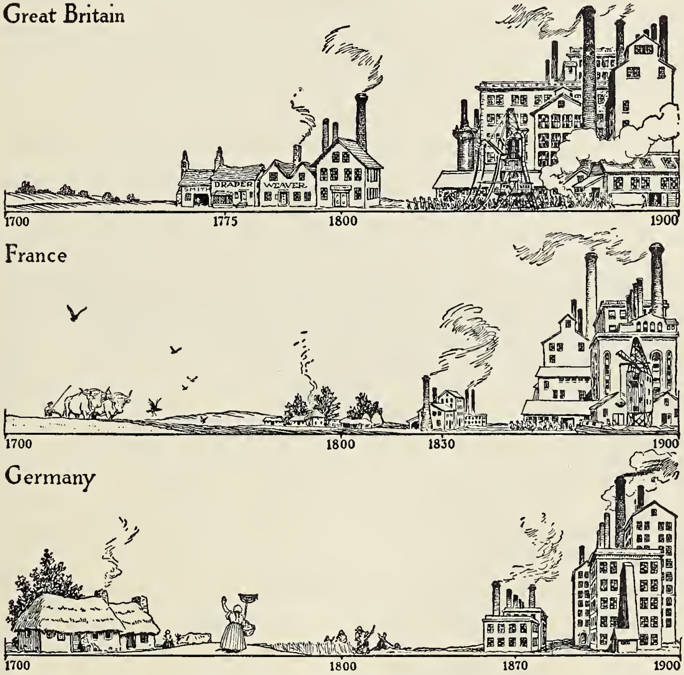
Great Britain
SMITH
DRAPER
WEAVER
1700
1775
1800
1900
France
1700
1800
1830
1900
Germany
1700
1800
1870
1900

Fig. 87. This pictograph tells the story of the Industrial Revolution in three of the four great industrial countries of the world today. It shows that the Industrial Revolution came later in Germany than it did in either Great Britain or France, but that when once started it developed rapidly

Great Britain, France, and Germany form the trio of powerful industrial nations in Europe. Great Britain and France are both small countries. How large do you think Germany is? Look at the map of Europe and notice the size of Germany.

"What a small country!" you think. "It's even smaller than France."

Yes, Germany is a small country — only a little more than 180,000 square miles in area. How does it compare in size with Great Britain and France? How small all these important countries seem when we compare them with the area of the United States.

Although Germany is small, it was one of the strongest industrial countries of the world before the World War. It had built up a thriving trade with every corner of the earth, and its empire was steadily growing. But Germany, like France, has only become industrialized during the past 50 years.

In 1800 Germany consisted of Many Quarreling States

During the World War all the newspapers were full of articles and news items concerning the German Emperor. The "Kaiser" was as well known to most Americans as was their own President.

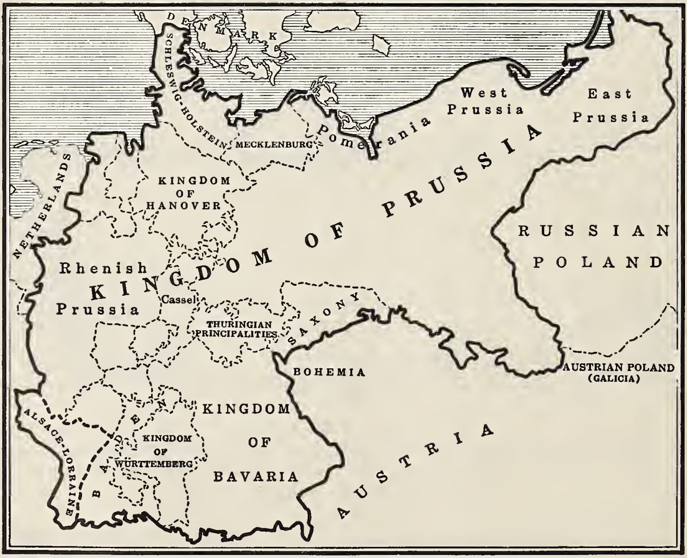
DENMARK
SCHLESWIG-HOLSTEIN
MECKLENBURG
Pomerania
West Prussia
East Prussia
KINGDOM OF PRUSSIA
NETHERLANDS
KINGDOM OF HANOVER
RUSSIAN POLAND
Rhenish Prussia
Cassel
THURINGIAN PRINCIPALITIES
SAXONY
BOHEMIA
AUSTRIAN POLAND (GALICIA)
ALSACE-LORRAINE
BADEN
KINGDOM OF WÜRTTEMBERG
KINGDOM OF BAVARIA
AUSTRIA

Fig. 88. The lands which were united to form Germany in 1871. Note particularly Alsace-Lorraine, which is an important territory influencing the history of both France and Germany

A century ago, however, there was no "Kaiser," for there was no "Germany."

In 1800 "Germany" was only a hodgepodge of independent states. There was one fairly large state in the north, called Prussia, with approximately 10,000,000 people, ruled by a king. There were about 30 other fairly large states, such as Bavaria, Saxony, Württemberg, Hanover, Baden, and Mecklenburg. They were not so large as Prussia, but each of them had a separate ruler.

Next in size there were some petty states, varying in population from less than 1000 to more than 10,000 people and ruled by dukes and counts. To make matters still more confusing, there were about six free cities ruled by their local city governments.

These states were in no sense like the states in our Union. They were independent of one another. Each ruler had his own little court and his courtiers. He was absolute dictator: collected taxes from his subjects, charged a tariff duty upon all goods crossing his boundaries, and had his standing army, in the smaller states consisting of only one or two officers and a handful of privates.

All these tiny states were somewhat like rival ant heaps. There was constant activity, but the activity was not always profitable. One monarch quarreled with another about taxes, or something else. A war was declared, and the two fell to fighting with great vigor. No sooner would one pair of states quiet down than another pair would begin. Sometimes many states joined the fray.

Every little state was about as self-sufficient as a manor of the Middle Ages in England. The people made most of their own goods and raised their own crops. There was little travel across what is now Germany. People were inclined to stay close to their own homes within the narrow borders of their state; hence they knew very little about the world outside.

Village and Town Life in the Early 1800's

England was well on her way to becoming a manufacturing country when most of the German people were still making their living by farming. As late as 1850 serfs were still paying the wealthy landlords with services and a share of their farm products. Travelers in Germany at that time tell us that life for the

German serf was no more pleasant than it had been for the English or French serf of an earlier date.

The three-field system of farming that was used throughout Europe in the Middle Ages was still the method used in dividing land in Germany even in the early nineteenth century. The farmers' plots of ground were small, and farming was done with the crude hoes, hand plows, sickles, and scythes of medieval times.

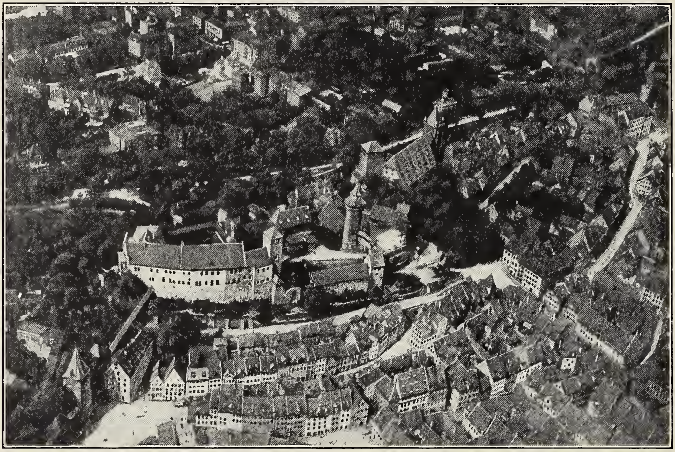

Fig. 89. Because of the constant danger of wars in the country we now call Germany the towns and cities of the Middle Ages were often fortified against attack. Nürnberg, shown in the picture, was one of these fortified medieval towns. (Courtesy of the German Railways)

In England and France, you remember, most of the craftsmen lived in the towns and were not farmers. In Germany, however, many of the farmers were craftsmen also, who earned a little money by handicraft when there was not much work on the farm. They spun yarn and wove cloth by hand at home. Some of the peasants carved children's toys and fancy cuckoo clocks from wood. These were highly ornamented and very skillfully made. Near the few iron mines some of the peasants made fine things of iron.

Work on the farms, however, even in slack seasons, did not permit men to spend a great deal of time at handicrafts. So, although the peasants sometimes added a few much-needed coins to the income from their farms, they were never able to produce many articles.

In the towns and villages there were workshops of tailors, cobblers, smiths, carpenters, and potters. These supplied most of the needs of the neighboring farms. Sometimes things were needed which the town craftsmen could not supply. Perhaps the needed article might be bought from a strolling peddler. If not, then people must wait until the yearly fair.

These fairs were really great markets, like the regular weekly market where townsmen and peasants met to buy and sell food. The yearly market was a great event, however. The spices, clothing, furniture, tools, and implements were brought to town by traders and merchants. The peasants, for their part, sold cattle and raw materials, such as wool and flax which the townspeople could make into cloth.

In addition the people were always well entertained by puppet shows, tight-rope dancers, and "English riders." Everyone from town and country came to the fair.

With the exception of the excitement of the yearly fair, life was usually very dull for the peasants; and though they worked hard, yet sometimes, if it had not been for their bits of handicraft, they would not have had enough on which to live.

Farming was so unprofitable that many people left the country. You will remember that between 1840 and 1890 thousands of these German peasants came to the United States to live.

Before 1870 the towns of Germany were small and unimportant

Towns and cities did not grow so rapidly in Germany as in England or France. In 1815 the combined population of the twelve largest towns in the German states was only about 750,000. At that time Paris was a city of over 548,000, and London already numbered more than 1,000,000 population.

After 1840 came the Railroads, and Germany began to Change

Throughout the early 1800's almost three fourths of the German people were living on farms or in little villages. There was little travel or communication between the scattered parts of the country, for the roads were very bad.

Then about 1830 a number of German business men saw that the separated states might be greatly benefited by railroads, for they had observed that England and France were already using railroads very successfully to tie together their scattered cities and regions.

In 1835 the first railroads were laid in Germany. In Prussia alone railways grew rapidly, as shown in the table. Of course a change came about in the industries and in the lives of the people as soon as transportation improved. One writer said: "The railway changed the whole face of the land. . . . There was something American about it."

Number of Miles of Railways in Prussia, 1844–1860

Year	Miles
1844	500
1848	1500
1860	3500

Travel and trade are always handicapped by bad roads. With the new transportation it was possible in a few hours to send products 100 miles or more to market. Such a trip would have required a week or more in earlier days.

Heretofore iron-mining had been an unimportant industry, but between 1865 and 1875, with the coming of railroads, this industry began to grow. The accompanying table shows the increase in the production of pig iron. Compared with the amounts which England and the United States were producing at the same time, these figures seem very small. But the increase meant a great deal for German industry.

Year	Tons of Pig Iron Produced
1865	975,000
1875	2,029,000

Coal production also rose, and even more rapidly than iron. In 1830 only a very small amount of coal was being mined; 28,330,000 tons were mined in 1865. By that time Germany surpassed France in the production of coal and iron. She was still far behind England, but she was making strides toward becoming an important industrial country.

BETWEEN 1860 AND 1871 PRUSSIA UNITED THE GERMAN STATES INTO AN EMPIRE

There was one great stumbling block to rapid change in Germany, however. This was the fact that it was not a unified nation. The German people were like a large family of children who could not live together in peace. They spoke the same language, they lived mainly by the same kinds of work (farming and handicrafts), and in many other ways they were much alike. Yet the states quarreled with one another constantly.

Prussia was the largest and the most progressive of the German states (find it on figure 88). She was one of the first to introduce manufacturing and railroads, and it was she who arranged agreements among the states which made it easier to carry on trade.

The Prussian rulers were ambitious to unite the many little kingdoms. In the 1860's Prussia had a very brilliant and powerful statesman, Otto von Bismarck, who was the chief counselor to the king. Under his leadership Austria and Denmark were defeated in war and great amounts of land were added to Prussia.

Then Bismarck argued that if the strong states like Saxony, Bavaria, and Hanover would combine with Prussia they could form an invincible German nation.

About this same time Bismarck began to covet certain French territories, especially Alsace-Lorraine, which at one time had been Austrian territory. For years many French leaders had also cast envious eyes at land which Germany held along the Rhine. They wanted the Rhine to be the boundary between Germany and France. At length in 1870 war was declared between France and Germany. By a series of startling victories the German armies swiftly defeated the French troops and took Alsace-Lorraine. After France had surrendered and Prussian leadership was secure, the rulers of the smaller states agreed that King William of Prussia should become emperor.

In 1871 William was proclaimed the first German emperor. The dream of the Prussian rulers was realized. For the first time Germany was a united nation, including within its boundaries all the states, both small and large, which had formerly been independent.

Then began Germany's great industrial development. She changed her ways of living more rapidly than had any other country in Europe. Her leaders were in a great hurry to catch up with the other industrial nations, especially England and France. In the next 40 years they succeeded.

Germany's Location was Favorable for Trade

Look at the map following page 328. Germany occupied a central position, with France, Belgium, and Holland on the west, the Scandinavian countries on the north, Russia along her eastern boundary, and Austria-Hungary on her southern frontier. She lay almost in the center of the growing trade routes between the different countries in Europe. The new railroads and the improved roads, rivers, and canals were connecting her with many other countries. Germany was indeed in a position to develop a great trade with all Europe.

The first step was to improve transportation. For some years Germany had been laying rails and transporting goods over them from one part of the country to another. As the years of the 1870's and 1880's went on, these railways crossed the boundaries into other countries, connecting her cities with all the larger cities of Europe.

Other means of transportation were improved. Rivers were deepened. New docks were built, and old ones improved. More and more boats were going back and forth from one country to another. Manufactured goods and raw materials were being shipped. Even canals were being dug, not only within the boundaries of Germany but across the boundaries, connecting Germany with other countries.

Thus a great trade was growing, a trade that extended to England, France, Russia, Austria-Hungary, Belgium, the Netherlands, and many other countries.

German Agriculture, 1871–1914

We have seen how people farmed in the United States, England, and France. We have contrasted the great open farms and the machine agriculture of the United States with the small farms and the intensive cultivation in France. We have contrasted both of those with farming on the great landed estates of Great Britain.

What about farming in Germany from 1871 to 1914? The German system of farming was somewhat like that of England and also like that of France. There were both landed estates and small peasant farms.

The small farms of the peasants

In Bavaria and the west of Germany, near the French border, was a peasant agriculture much like that on the small French farms.

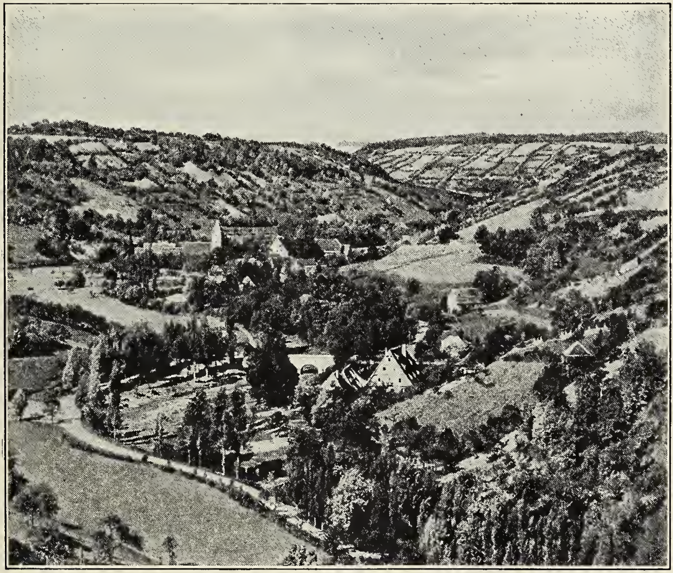

Fig. 90. A Bavarian valley. This picture shows that much of the land is divided into small farms. Most of the farmers own their own land

Look at Bavaria on the map of figure 88. This is one of the most important farming regions of Germany. Throughout it most of the people are farmers. There are a few large cities (Munich, for example), but small villages and towns near the farms are more numerous.

In 1913, before the World War began, Bavaria, the land of farms, was cut up into small plots; 70 per cent of all the land was in holdings of less than 50 acres each. You see that most of the farms were about the size of the holdings of the French peasants. There were very few huge tracts of land like the English landed estates.

Most of the peasants in Bavaria owned their farms. Some of them, who had very small plots of, say, five acres, worked part time for the wealthier farmers. Only a few farmers worked entirely on another man's farm.

In the north and east of Germany the farms were very different. Wealthy landlords called squires, or "Junkers," owned much of the land in large tracts of perhaps 2000 acres or more.

This farming resembled the English system. The wealthy Junkers lived on their large estates, but they did not farm them. They hired peasants to work for them. Some of the peasants worked regularly; others, coming from other parts of Germany, worked only during the busy planting or harvesting seasons. In the later 1800's, as the German industries and factories grew, it became difficult to get German peasants for these short seasons; so the Junkers began to hire Polish, Russian, and Austrian laborers. These temporary workers lived in shacks on the Junker's land.

Much of the land of the north and east of Germany was taken up by these large estates. In Mecklenburg 60 per cent of the land was divided into large holdings of 250 acres or more. Large crops were raised on these estates, and the products were sent to German cities or to other countries.

What crops were raised on German farms?

Study the maps of figures 91 and 92. Which is the more important grain raised in Germany, rye or wheat?

If you happen to know any German families, you have probably noticed that they do not eat much white bread. They prefer rye bread, which is the typical German bread. Germany raises more rye than any other European country except Russia. France and Spain raise great amounts too (see figure 91).

Barley and oats are grown in Germany, and wheat also as you will see in figure 92. They are not so plentiful as rye, however.

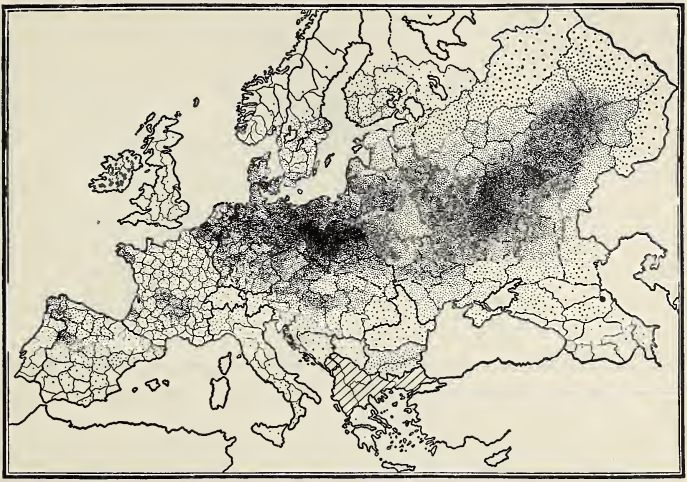

Fig. 91. Where the great rye crops of Europe are grown

Two other important agricultural products are potatoes and sugar beets. Look on the map of figure 93 and see where potatoes are grown in Europe. Like the French, the Germans learned, after 1800, that potatoes are a cheap and nourishing food; so each year they planted many acres to potatoes. Notice on the map the heavy

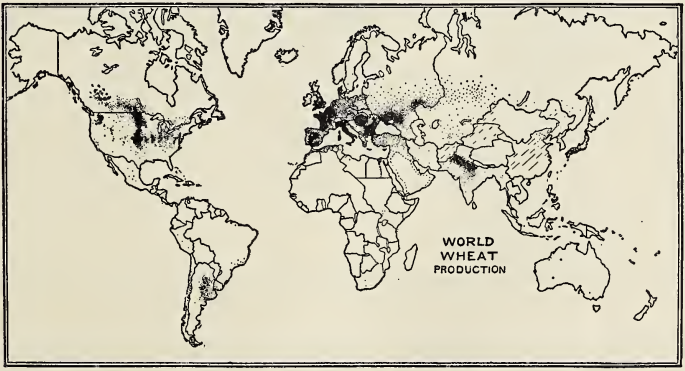

Fig. 92. Where the great wheat crops of the world are grown

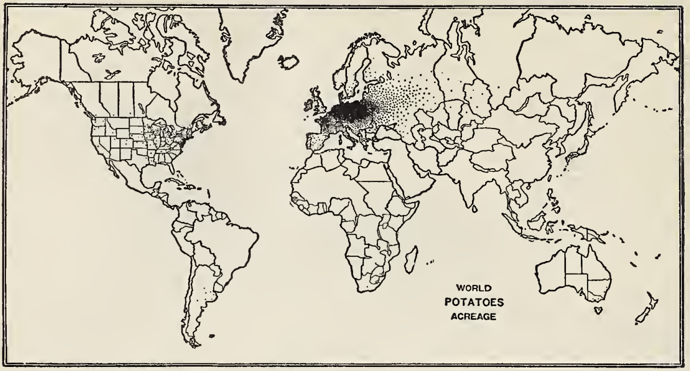

FIG. 93. Where the great potato crops of the world are grown

black spot, which marks where potatoes are raised. It seems to follow the boundaries of pre-war Germany. All through Europe, in central and southern France, Ireland, England, Russia, and in central European countries, millions of bushels of potatoes are grown. But Germany is the greatest potato-raising and potato-consuming country in the world. *In 1913 Germany raised between one fourth and one third of all the potatoes grown in the world.* Doesn't this make you wonder why people still speak of "Irish potatoes," and not of "German potatoes"?

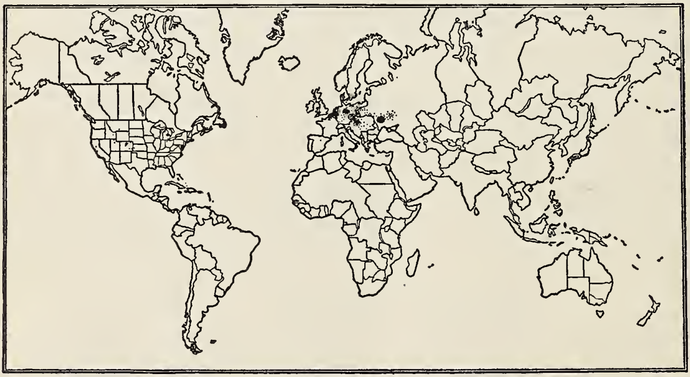

FIG. 94. Where the great sugar-beet crops of the world are grown

You remember from your study of *An Introduction to American Civilization* that sugar cane grows only in tropical countries such as Hawaii, the Philippines, Porto Rico, and Cuba. Most of the world's sugar cane comes from climates much warmer than that of northern Europe.

Germany, of course, was too far north to raise sugar cane. So German statesmen and scientists decided that it would be well for Germany to find another way to make her own sugar.

People in Europe had been making sugar from beets for some time, as we learned in our study of France. However, the amount of sugar that could be extracted from the beets was very small.

After 1870 German scientists discovered how to extract greater quantities of sugar from beets. Today the German sugar-beet industry yields more than $1,000,000,000 worth of sugar and molasses in a year, and Germany grows more sugar beets than any other country in the world (see map of figure 94).

German chemists improved farming and increased agricultural production

The German chemists were very good scientists. In addition to the making of beet sugar they learned many things about how to improve farming. They learned, for instance, how to make their soil more fertile. People had known for ages how to use manure and other simple fertilizers, but the chemists learned that certain chemical substances were much better. They then began to manufacture these in great quantities.

Another thing which the German scientists learned was that certain crops, such as clover, fertilize the soil naturally. The peasants who planted clover and used chemical fertilizers, as the scientists had advised, found that their fields were yielding greater crops than ever before.

After 1850 the large Junker estates in the north and east of Germany became models of scientific farming. Chemical fertilizers were used to supply any lack in the soil after an analysis had been made to find out what was needed. The crops were changed from year to year, as they were in the United States. The amount of land under cultivation increased, and, naturally, the crops

Sugar-Beet Production	
Year	Yearly Average in Tons
1866–1870 . .	2,500,000
1886–1890 . .	8,722,000
1906–1910 . .	13,423,000

increased greatly. The table opposite shows you the great increase in one crop alone. In less than 50 years the sugar-beet crop increased over 5 times.

Other crops as well, particularly rye and wheat, increased very much. Notice in the next table how the amounts of two kinds of grain raised in Germany increased in a decade.

Estimated Average of Tons of Grain raised Every Year, 1900–1904, 1911–1912		
Year	Wheat	Rye
1900–1904	4,299,000	9,987,000
1911–1912	9,281,000	12,329,000

Every kind of live stock except sheep also increased greatly between 1873 and 1912. (See the following table.)

Production of Live Stock				
Year	Horses	Cattle	Pigs	Goats
1873	3,300,000	15,800,000	7,100,000	2,300,000
1912	4,500,000	20,200,000	21,900,000	3,400,000

POPULATION WAS GROWING AND PEOPLE WERE MOVING INTO CITIES; FOOD HAD TO BE IMPORTED

In the days before 1870, when the population of the German states was small, German farmers were not only able to feed their own people but were also able to ship food to other countries.

After 1870 things changed rapidly. First, population in Germany grew fast, as figure 95 shows. Between 1870 and 1911 the number of people increased by about 25,000,000. Second, more and more people crowded into cities (see figure 96). As we might expect in a newly industrializing country, many of the people of Germany left their farms to work in factories, mills, and mines. As a whole, however, the rural population of Germany decreased only slightly during this period.

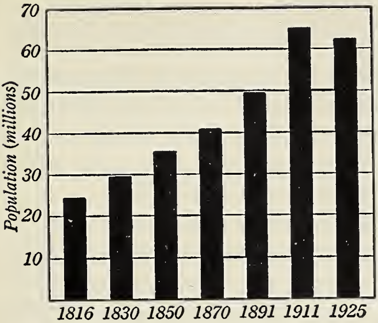

FIG. 95. Growth in the population of Germany, 1816–1925

As Germany turned more and more to manufacturing, she faced the same problem that England had to meet: How could the people be fed? With the rising city populations there was only one answer—food must be brought in from outside countries.

Between 1870 and 1880, therefore, Germany ceased to be a food-exporting country and began to import food from other regions. As time went on and Russia began to export the grains which she raised in her rich southern region, Germany came to depend more and more upon her neighbor. Between 1895 and 1900 only about three fourths of the wheat consumed by the German people was raised at home.

Moreover, in spite of the increase in production of cattle and pigs, it was not enough to supply her rapidly growing population. Germany had to import cattle, beef, bacon, milk, cream, butter, and lard.

So greatly had the Germans changed their ways of living by 1914 that only five sixths of their food was raised on German soil. One sixth had to be brought in from other countries.

Germany was not nearly so dependent upon other countries for food, however, as was England.

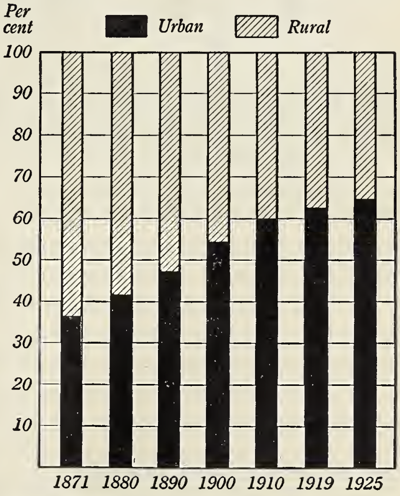

FIG. 96. In 1871 about 36 per cent of Germany's population were living in cities; by 1925 the urban population had grown to a little more than 64 per cent

Germany was becoming a Leading Manufacturing Nation

Remarkable changes took place in 50 years in German industry. When we studied the industrial development of Great Britain, we learned that changes took place fairly slowly over a long period of time. Not so in Germany. She was quite transformed in one third of the time required in Great Britain.

In 1870 very little iron was being mined in Germany, and almost no steel was being manufactured. About 40 years later approximately 15,000,000 tons of each were produced annually. During the same period the amount of coal mined increased nearly 7 times.

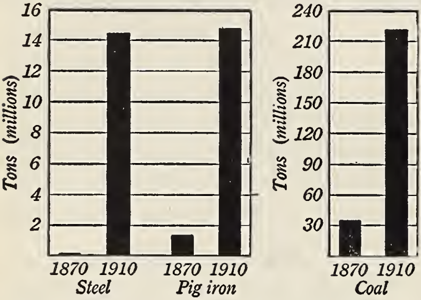

Fig. 97. These graphs illustrate the rapidity with which Germany industrialized after 1870. Steel, pig iron, and coal are the foundations on which an industrial nation is built

In 1870 there were only short lines of railway in Prussia and other sections of Germany. In 1914 thousands of miles of railway bound together every section of Germany in an *efficient and unified transportation system.*

In 1870 German scientists were just beginning to make inventions. By 1914 they had perfected thousands of new devices and had surpassed the United States in the invention of complicated machines which did the work of human muscles.

In 1870 there were almost no hydroelectric power stations in Germany. In 1914 millions of horse power were being made by burning coal or by damming rivers from the Alps to the Baltic Sea.

In 1870 most of the German trade was carried on between neighboring communities or neighboring towns. In 1914 it was world-wide. German salesmen everywhere sold articles marked with the famous "Made in Germany" stamp. In China, Japan, India, South America, South Africa, and the Near East they were busily finding purchasers.

In 1870 the German Empire consisted essentially of a little more than 200,000 square miles of land in central Europe with a population of 41,000,000. In 1914 it included about 1,230,000 square miles and about 77,000,000 people in various parts of the world.

What brought about this transformation in Germany?

There were several factors; but the chief ones were (1) Germany's favorable location for trade, (2) natural resources, especially great stores of coal and iron, (3) hard work by ambitious German people, and (4) a remarkable development in scientific knowledge and invention.

Do not those four factors sound very familiar? Where have we met them before?

The history of the three countries we have already studied shows the very great importance of these factors.

1. The United States had great quantities of coal and iron, a favorable location for trade, and people willing to work, who made wide use of scientific knowledge. She became a wealthy industrial nation.

2. England had huge deposits of coal, and until recently she had a sufficient amount of iron for her needs. She was well located for trade. Her people were numerous and willing to work. They developed and used science in the invention of engines and machines. England became a wealthy industrial nation in spite of her small size.

3. France also became a wealthy industrial nation, even though she lacked coal. She had all the other factors in her favor, but her lack of coal hampered her industrial development.

4. In Germany we find practically the same factors which produced the high standard of living of the American, the English, and the French people. All these factors were as important to Germany as to the other countries. Without any one of them Germany would have had difficulty in attaining her position as a leading industrial nation. Let us review them briefly.

We have already talked about the importance of Germany's location for trade. We shall see now how the factor of coal and iron played a very great part.

GERMANY'S NATURAL RESOURCES

The three important coal fields of Germany — the Ruhr, the Saar, and Upper Silesia

Germany has billions of tons of coal of different grades lying beneath her soil.

The coal beds of Germany, like those of the United States, lie in separated deposits. One is in the valley of the Ruhr River. The second also is in a river valley — the Saar valley.[1] The third is in Upper Silesia. Locate each of these regions on the map of figure 99. The first two are only 150 miles apart. In 1913 these three fields produced 92 per cent of Germany's coal: 60 per cent came from the Ruhr, 23 per cent from upper Silesia, and 9 per cent from the Saar.

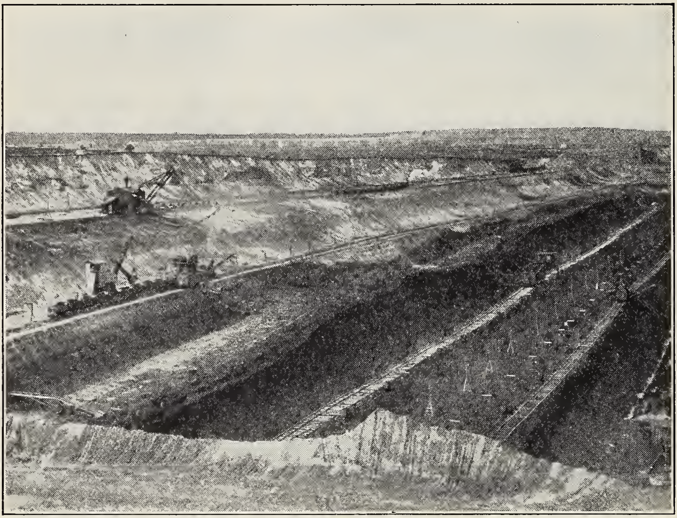

FIG. 98. Germany owns this open-pit coal mine, said to be the largest of its kind in all Europe. The coal is not of very good quality, but the German scientists have learned to use it efficiently

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[1] After Germany was defeated in the World War, it was agreed by all the nations involved to put the Saar Basin under the government of the League of Nations for fifteen years. It will be decided at the end of this time to whom this region shall belong.

Study the location of these three places carefully. Of the three, the Ruhr valley is by far the most important. In it has grown up a manufacturing district no less important than Pittsburgh in the United States or Manchester in England.

The Upper Silesian fields are said to be so vast that they contain more coal than all the coal fields of England.

The great Lorraine iron field

Now look again at the map of figure 99. Which iron field appears to be the most important? Is it not the Lorraine field, which, as you can see, stretches across the Franco-German border?

Before 1870 the Alsace and Lorraine regions were French; but when Bismarck conquered France in 1871, Germany demanded these two provinces.

There were many reasons why Germany wanted them, but one of the chief ones was the iron of Lorraine. Between Metz and Cologne lay some of the best iron deposits in the world. Germany had quantities of coal, but she lacked iron. France had great deposits of iron, but lacked coal. Germany, the conqueror of France in 1871, added the French iron district to her empire and thus secured large quantities of the second of the two most important materials needed to make a powerful industrial nation.

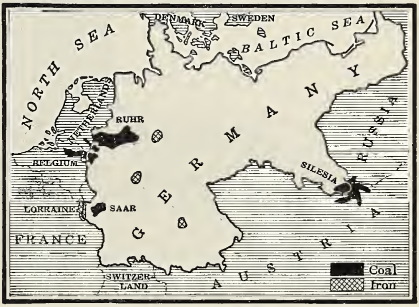

Fig. 99. Map of coal and iron deposits

Then began the great German production of iron and steel. In 1870 only 170,000 tons were manufactured. In 1910 the production had reached 14,000,000 tons. This was more than England was producing and three times as much as France produced.

The iron industry was not new in 1871. But it is said that more new iron companies were started in Prussia alone between 1871 and 1874 than during all the previous years of the 1800's.

Now do you understand why the region between the Ruhr valley and Lorraine is so important, and why much of Germany's industrial life centers there? This small region is a strip of land about 200 miles long and less than 100 miles wide. *Here coal and iron are both found close together.* The iron can be carried cheaply to the coal fields, or the coal to the iron mines. This is an ideal arrangement for the economical manufacture of steel. Not in many places on the earth does this occur. Are the coal and the iron mines as close together in the United States as in Germany?

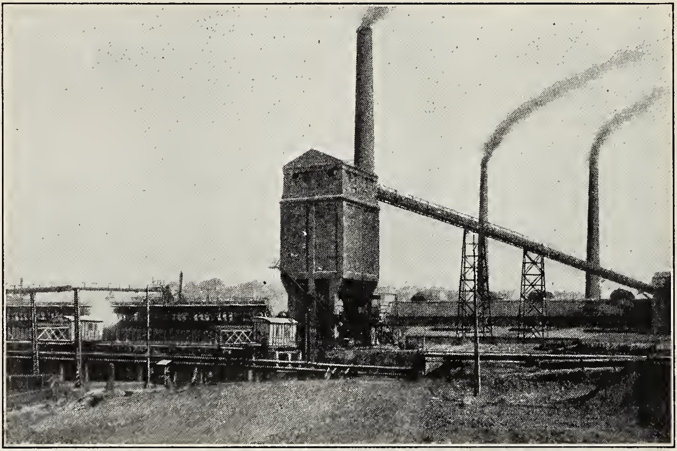

Fig. 100. One would not find a great coke plant like this located in the Ruhr if there were not great coal resources close by. It indicates the importance of this coal field

Let us look at this important Ruhr region.

How the Ruhr steel district looks to a traveler

The Ruhr is a small river on the western German frontier. At its source it is a clear stream flowing through the mining region of Germany into the Rhine. As it becomes larger it also becomes black and greasy, until the dirt of the coal dumps and the factories destroys its beauty completely.

With the aid of about a dozen locks the Ruhr River is navigable for about 46 miles. As the traveler approaches the mining and manufacturing district he sees countless barges passing on their way to France and Belgium. These canal barges are banked high with coal. The boats are as closely crowded together as junks on the Chinese rivers. There is no jamming and shouting on the water, however, for everything is arranged by signals. The ease with which this heavy traffic is handled is very similar to the ease with which trains are handled in a large American railroad station.

At night the factories of the Ruhr present a fascinating sight. The light of the flares from the blast furnaces makes great numbers of stacks, mills, wharves, and railway tracks stand out clearly. Here more than 4,000,000 people are toiling like the gnomes of the old Rhine legends.

Chimneys split the sky line like the trunks of great dead trees. There is a deafening noise in the mills — the shriek of machinery and the hiss of white-hot metal, the blowing of whistles and the testing of new engines.

The plants of the Ruhr are gigantic affairs. So great are they that literally coal and iron go in at one end and come out at the other end as finished locomotives ready to be tested. There are many other steel products besides locomotives, but all come out ready to be sold. "Just like a Ford automobile!" you exclaim. Exactly.

Amid all this drama of the frenzied labor of 4,000,000 people there is no sight more interesting than that of the furnaces. Masked men battle with hot iron. They must have their faces covered so as to protect them from the smoke, dust, heat, and fumes of the furnaces and the white-hot steel. Great blocks of hot metal, weighing 100 tons or more, are easily moved by cranes. The rollers seize the piece of metal, and in a few moments long rails that look like transparent red serpents writhe from the rollers.

The crucible steel which is produced in the Ruhr foundry at Essen is said to be as fine as any steel in the world.

To these workers the coal and iron of the Ruhr valley are life itself. They talk of coal constantly in the streets and in their homes. Coal is the key to Germany's industry.

After 1871 German inventors began to work out new ways of doing things by means of machines. People with capital saw opportunities for making money by mass production, as manufacturers in England, France, and the United States had done. They put more and more capital into machinery. They bought larger supplies of raw materials. They built greater factories. And they developed efficiency to a high degree in machine manufacture.

Essen, an example of the changing Ruhr cities

The machines of Germany were truly marvelous. Those made in the giant Krupp works at Essen were famous even before the World War.

Essen is the chief city of the Ruhr district. It is an old city, dating from 800. For hundreds of years it slept, an obscure little hamlet.

Even before 1849 there had been in Essen a factory run by a family named Krupp. It was really a crude little shop, which made tools for craftsmen. The tools were very good, and soon people all over Germany were demanding Krupp tools. Gradually their fame spread outside Germany.

Then came the machine age with all its changes in ways of working. Essen changed and became a perfect hive of noisy activity. The giant machines of the Krupp works began to turn out guns and cannon in great numbers. So superior were these guns that the nations of Europe bought at Essen. But these were not the only steel products manufactured. There were steam engines, hammers, shafts for river and ocean steamers, and many other giant parts of giant machines.

Today, although Krupp no longer makes the great guns, every kind of heavy steel product is turned out of the shops — great marine engines and other kinds of engines, railroad cars, freight cars, and mammoth beams for skyscrapers and bridges.

Are there great steel works like the Krupp works in France? in England? in the United States? Why was Germany able to produce such fine machinery and manufactures?

You have already learned that German scientists were finding ways of increasing agricultural production. German scientists had also discovered ways of getting a great deal more power from low-grade coal than they had ever been able to get before. What were they doing in other industries?

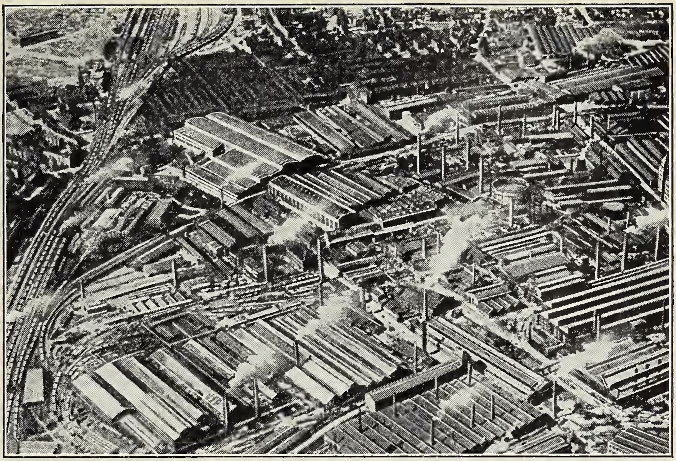

FIG. 101. Part of the great Krupp works at Essen. With its acres of factories, its dozens of smokestacks, and long lines of cars on its railroads it might be part of a city in the heart of America's steel-making district

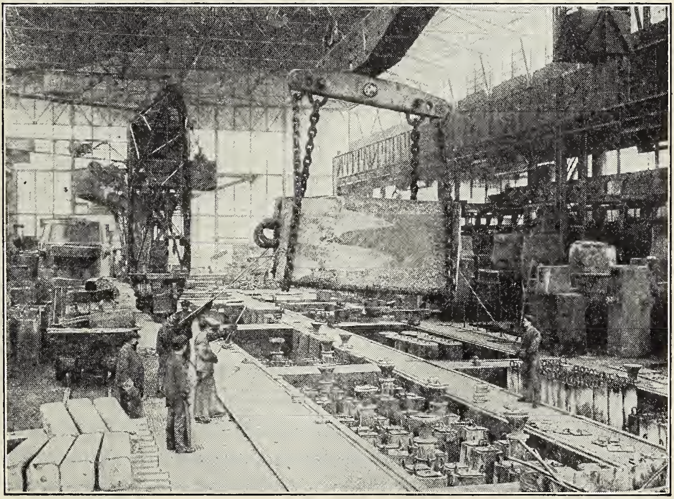

FIG. 102. An interior view of the Krupp works

How Science helped German Industries

After 1871 the universities and engineering schools of Germany grew rapidly, for the government was encouraging young men of intelligence to devote themselves to scientific study and work. From these universities many of the young men went into the large industrial corporations, where they were able to use their special studies in the invention and improvement of machines. They learned better ways of manufacturing and transporting things, as well as how to make machines and engines more efficiently. But the chief thing they learned was to reduce waste as much as possible and to produce things cheaply.

German scientists were working on many of the same problems as were the scientists of the United States, Great Britain, and France. They studied how to refine iron ore more cheaply and how to make fine grades of steel. They learned to combine chromium, manganese, tungsten, nickel, and other things with iron to make hard steel alloys.

Thus Germany's output of iron and steel became much greater than that of Great Britain or France. Since she could sell better steel for lower prices, she could take much of the trade away from them. For years the mark "Made in Germany" on fine instruments and machines was enough to make a purchaser decide in their favor.

The scientists of Germany improved almost every field of industry. They learned clever ways of making dyes from chemicals. For example, some German linens and cottons were dyed indigo blue. For many years this color could be obtained only from plants. Scientists discovered, however, that a better dye could be obtained from *coal tar*, an important by-product that had formerly been thrown away as useless.

Many other colors were produced artificially by the German scientists. These chemical dyes made "fast" colors which could be manufactured cheaply in great quantities. In fact, mass production was used throughout the German chemical-manufacturing companies, for that meant cheap production and large sales. By 1900 four fifths of the world's dyestuffs were supplied by Germany.

It was discovered in Germany that even perfumes and flavor-ings could be made chemically. A chemical compound called vannilin was produced as a substitute for natural vanilla. A chemically made camphor was discovered, to serve as a substitute for Japanese camphor. Lemon flavoring with a real lemon taste was made without lemons. Fabrics were woven which looked and felt like silk, but which had never come from a silk cocoon. They were made from pine wood and called rayon to distinguish them from real silk.

These are only a few examples of the improvements made in industry by chemical study. As early as 1898 one factory in Germany employed 150 men to study chemistry in connection with what the company was manufacturing. There were 75 of these men at work on improving the methods of the factory. The other 75 were engaged in making experiments. Perhaps only one of these experimenters would discover something of value, but the factory felt that one discovery was worth the salaries of 75 people.

In 1909 in the chemical industries of Germany there was one university-trained chemist to every 40 working people. That gives you some idea of how important the German manufacturers considered their scientists. The constant use of science in industry was a very great factor in making Germany an industrial nation.

The old industries rapidly changed into new ones. The German woolen and silk industries became more and more important. Electrical industries which made electric generators, cables, and other equipment grew tremendously.

You will gain some idea of how rapidly Germany was changing and becoming industrialized from the table opposite. It shows how machinery was replacing hand work in the textile industry in one city. This is typical of the changes that were occurring throughout the country.

Silk and Velvet Looms at Krefeld, Germany

Year	Power Looms	Hand Looms
1890	5400	22,500
1900	9700	7200
1909	9900	2700

Nevertheless, hand industries did not disappear entirely from Germany. Certain articles, such as fine cutlery, baskets, and pottery, were still made by hand.

Men with Capital formed Industrial Corporations

During the years 1880–1910 a number of great companies were formed in Germany. Like those of the United States, they sometimes joined with smaller competitors and formed corporations.

The leaders of the few corporations controlled many industries in Germany by bringing together many related industries into one corporation. You remember how certain American "captains of industry" were doing that very thing.

By 1914 the whole steel production of Germany was in the hands of 31 firms. These firms had certain agreements which made them more or less partners. For instance, they agreed to charge certain definite prices and not to compete with one another. In this way they acted as one company rather than as many. Such a combination was not called a corporation, however, but a "cartel" (*Kartell*). One cartel alone controlled about 90 per cent of the output of steel.

So Germany became the Center of European Land Trade

You have seen how favorable for trade was Germany's location. She was surrounded on all sides by other important European countries. Streams of trade flowed back and forth between Germany and Russia, and Serbia, Rumania, and other Balkan states. With those countries she traded coal, machinery, and manufactured goods for grain and other food. Another stream flowed to France, Belgium, and Italy. Germany did not buy so much food from these countries, but she sold large amounts of coal and exchanged her manufactured goods for theirs.

Germany's European trade had grown to be valuable indeed. German industries also were growing very rapidly. Before 1914 Germany was really the industrial center of Europe. The life of Germany was bound up with that of all Europe because of trade. But Europe proved too small a market. Germany broadened her trade to include the whole world. Everywhere British and French traders met keen German competition — in North America and South America, in Africa, and in Asia.

In 1894 Germany's trade with other countries amounted to $1,700,000,000. By 1913 it was worth over $5,000,000,000. In the latter year the foreign trade of Germany was very rapidly approaching in size that of Great Britain.

Like Great Britain, Germany had become dependent upon outside countries. She was importing much food and many raw materials to feed her workers and machines. She was dependent upon the rest of the world, and the rest of the world was dependent upon her.

We shall turn in the next chapter from the story of the astonishing development of German world trade to Germany's search for colonies.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

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CHAPTER X

GERMANY'S SMALL EMPIRE AND HER GREAT WORLD TRADE

As the factories of Germany needed more raw materials, the growing city population needed more food

You have learned that Great Britain's empire grew enormously in the 150 years after she adopted machine manufacturing. British traders and British armies seized territories in the farthest corners of the earth. You saw also that France became to some extent an industrial nation. She too reached out and seized colonies, as Great Britain had done.

So it was with Germany. When she adopted machine manufacturing, she traded around the world, and her government acquired colonies.

But Germany was greatly handicapped. As you know, before 1870 Germany was made up of many small quarreling states. She turned from handicrafts to machines much later than either France or England, and so the story of Germany's empire-building begins later than that of those two countries.

It begins with the 1880's, less than 50 years ago. By the time Germany had begun to be an important trading nation the really desirable colonies had already been gobbled up. First, North America had been taken. Second, there was little chance of settling in any part of Mexico, Central America, or South America, for in 1823, in the Monroe Doctrine, the United States had said to every European nation, "Hands off Latin America!" Third, India was under British control. Fourth, Indo-China was French. Fifth, the best portions of Africa had gone into the hands of Great Britain and France.

There were some scattered spots in Africa in which the English and French had not yet settled. German traders went into them and established business, and the German government took control of them. From them German business men obtained diamonds, timber, rubber, and other tropical products. In China Germany took control of one fairly large district called Shantung and three smaller ones. In addition she acquired a few small islands in various parts of the oceans.

After all, the empire she acquired was small, but it *was* an empire.

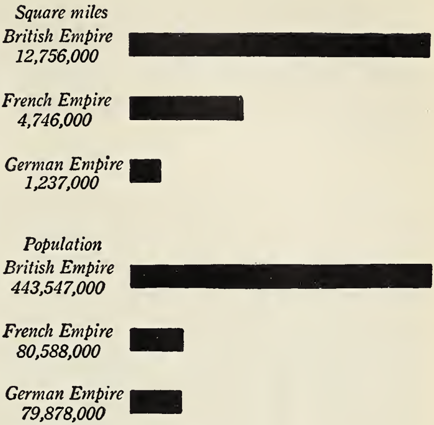

FIG. 103. A comparison of the area and population of the British, French, and German empires

Figure 103 shows just how small this infant empire was in comparison with the lusty empire of Great Britain in 1914. How do the area and the population of the three compare?

How Germany got her Colonies in Africa

Look at the map of figure 104 for the German possessions in Africa. On the southwest coast of Africa Germany governed, in 1914, the territories called Togo, Cameroons, and German Southwest Africa. On the southeast coast she had a colony now called Tanganyika Territory.

How did she get her colonies? In much the same way as did Great Britain. First, daring German traders and missionaries went into the region. The business men discovered its possibilities for trade and established trading posts. The missionaries tried to convert the natives to the Christian religion; but both traders and missionaries had difficulties which they themselves could not settle, and German soldiers were sent to keep the natives in order. Finally the German government took over the region and made it a colony of the German Empire. Those were the steps by which colonies were taken.

By 1884 there were 60 German trading posts on the west coast of Africa. A few years later there were more than 100 missionary posts. In 20 years more the region in which they were was a German colony. Let us study a little about each of these African colonies.

1. Togo

What sort of country do you imagine this to be? Find it on the map of figure 104. Notice that the coast line is almost without indentations. That means there are no harbors and that shipping is difficult from Togo. Inland the region is hot, damp jungle. Many people there have malaria, and on the whole the country is extremely uninviting.

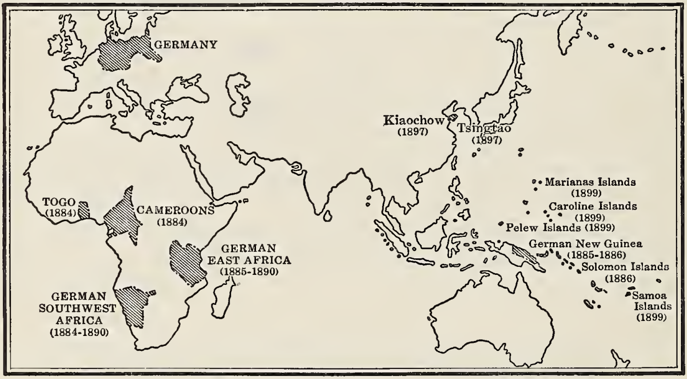
GERMANY
TOGO (1884)
CAMEROONS (1884)
GERMAN EAST AFRICA (1885-1890)
GERMAN SOUTHWEST AFRICA (1884-1890)
Kiaochow (1897)
Tsingtao (1897)
Marianas Islands (1899)
Caroline Islands (1899)
Pelew Islands (1899)
German New Guinea (1885-1886)
Solomon Islands (1886)
Samoa Islands (1899)

Fig. 104. A map showing the possessions of the German Empire

Inhospitable as the climate and the coast line seemed, however, German traders went in and settled. German merchants first established their trading posts on a small island off the coast. From the island posts they moved inland, and made treaties with the native chiefs by which they gained more and more territory. Finally, in 1899, Germany made an agreement with France and Great Britain, the countries which controlled the land bordering on Togo. This agreement settled the boundaries of the new German colony.

Togo was small, but Germany determined to make the most of it. The country had valuable products, for example, palm oil and fine woods. By sending steamships to call regularly for this export, German traders brought a large palm-oil supply out of the colony. Mahogany forests grew in Togo. These furnished valuable wood, and the German foresters developed them and increased the supply.

2. Cameroons

Second, consider the colony of Cameroons (see map of figure 104). The Germans settled there at the same time that they were settling in Togo. After much bargaining and discussion among the three nations, Great Britain and France finally agreed that Germany might add this colony to her empire.

The products which tempted the German traders in Cameroons were mahogany, ebony, ivory, and rubber — especially rubber. German business men developed good rubber plantations from the wild rubber of Cameroons. They cultivated cacao plantations also, from which they made a good profit.

There was another special reason why German business men were anxious to own lands in the tropics. They wanted to grow cotton on their own territory, so that the German textile industries might be independent of the cotton of the United

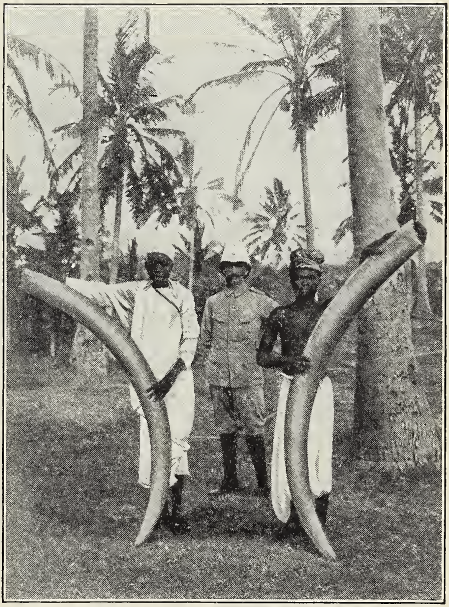

Fig. 105. This scene in former German East Africa helps one to understand why colonies of this kind were valuable. Here we see palms, five-year-old rubber trees, and great elephant tusks. Rubber and ivory are both valuable products. (Reproduced by permission of the Philadelphia Commercial Museum)

States and other countries. They felt that they could raise it themselves much more cheaply than they could buy it from others.

So attempts were made to develop cotton plantations in Cameroons. This plan was not very successful, however, for the raising of a good cotton crop depends on a constant supply of labor. The Germans in Africa had to use the natives to pick and clean the cotton. That caused great difficulties, for African natives were not accustomed to hard work in the hot sun. They lived in primitive fashion, and life in the tropical climate had always been easy for them. They needed almost no clothing, and food and shelter could be easily obtained; so a very little hunting and planting filled all their needs.

You can understand, therefore, that the natives did not welcome the idea of working all day in the hot sun to raise cotton crops for Germans, any more than those of Rhodesia did for the British, or others for the French or Belgians. When they were forced to work, they worked very slowly and escaped as much of it as they could.

There are many stories of German cruelty in forcing these black men to labor for them. We must not forget, however, that other Europeans — the British, the French, and the Belgians — were as guilty as the Germans of forcing black men to do their work in Africa. They all settled on the land of the natives and sometimes forced them to do their bidding, frequently disregarding the rights and protests of the native peoples.

3. German Southwest Africa — an example of the way in which colonial wars have affected the native populations

In 1883 a German merchant from the city of Bremen went to the southwest coast of Africa to trade. Other traders followed him. They took the land of the natives and opened trading posts. Before long German soldiers went there and conquered the territory.

By 1890 all of Africa marked "German Southwest Africa" on the map had been claimed by Germany except one small port.

The land was good for grazing; so the German government imported sheep from Australia. German settlers started cattle ranches and ostrich farms as well. Copper and tin were also found there, and mines were opened and operated by the thorough German methods. The ore was smelted at the mine by the aid of electrical power.

Diamond mines, however, were the really valuable source of income. They were first discovered in 1908. From that time on companies worked the mines very carefully and very profitably.

Germany knew how to develop a colony efficiently. She made it easier for people to travel into the interior by building good roads and railways and better hotels than did most of the other Europeans. She developed the forests of her colonies scientifically. In these ways she made her possessions profitable, but her rule of the natives was often very harsh.

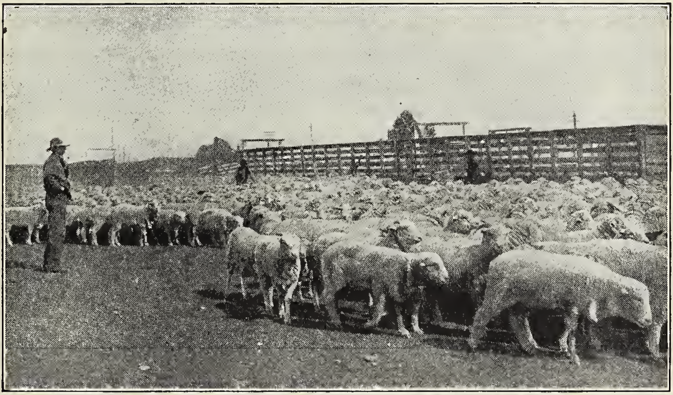

FIG. 106. A sheep ranch in German Southwest Africa. Mining and sheep-raising were two of the most important industries in this part of the German Empire

Two groups of natives in the interior of southwest Africa, the Hottentots and the Ovaherero, objected to the changes made by Germany in their country. They did not want railroads, nor did they want to pay taxes, nor to have Germans dig diamonds in their territories. So they objected, and finally killed some of the white settlers.

Immediately German troops were sent to Africa, and a war began which lasted three years and ended with the killing of many of the tribesmen and the enslavement of many more.

4. What Germany took in far-off China

Not only did Germany secure lands in Africa; she extended her empire to include parts of Asia as well.

As early as the 1880's German business men had been buying and selling goods in China. Finally, with the aid of their government, they took land as well as trade from the Chinese. Look on the map of figure 104 and find Kiaochow and Tsingtao. The Shantung peninsula, on which these two cities lie, is rich in coal and iron and stands in a position favorable for sea trade. It was the largest of the territories of which Germany took control.

The way in which Germany gained control of Shantung will tell you the manner in which other European countries secured control of other territories in China. It illustrates how they obtained from the Chinese government opportunities for trading.

In the 1890's there were many German missionaries in China, who were trying to convert the Chinese people to Christianity. In 1897, in a dispute, some Chinese killed two of them. The German government demanded from the Chinese government a large payment for the lives of these two people and insisted that the payment be made in land. Thus China was forced to lease Kiaochow to Germany for 99 years.

Since the bay of Kiaochow is a good place for foreign ships to land, the Germans immediately began to develop a port there in order to provide an outlet for the rich products of the Shantung peninsula. The port city, Tsingtao, was made a naval station for the German Pacific fleet. Soon German barracks with red-tiled roofs were built to house German soldiers, and great forts with powerful German guns protected the harbor mouth.

Germany also received other business privileges from the Chinese government. She was allowed to work the mines and to construct railway lines in the Shantung peninsula. In 1890 two German trading companies were formed. These companies supplied the capital needed for these projects, for much money was to be made from Shantung's valuable coal and iron deposits. The new railways to the port of Tsingtao carried ore to German ships. Before 1914 this German colony was bringing a very large income to the men who controlled it.

5. Germany also took islands in the paths of ocean trade

As German trade grew in the Far East the Empire spread into the Pacific Ocean, much as the empires of England and France had done. To build supply stations for her trading ships and naval vessels Germany gradually acquired small islands in many regions.

In 1885 she took a section of southeast New Guinea. Immediately afterwards the German flag was planted on other parts of New Guinea. In 1886 she took the Solomon Islands. Then in 1899 she took two of the largest islands of the Samoa group. These regions were very small, totaling a little over 95,000 square miles and having a population of only about 547,000 native peoples in 1913.

In 1899 she bought from Spain the Caroline Islands, the Marianas Islands, and the Pelew Islands. These small possessions total less than 1000 square miles and had a native population of only 60,000 people in 1913.

Why did Germany want so many small and insignificant islands? Chiefly because her ships needed coaling stations in the seas. In the later 1800's all the industrial nations enlarged their navies to protect their trade and their colonies. Germany followed the example of Great Britain and France in taking small islands. Like Great Britain, she wanted island bases where her naval and merchant ships could call for supplies and fuel, and also as bases of communication. Later some of these islands were used as wireless stations.

Besides acquiring an Empire, Germany was also extending her Trade in Turkey and Neighboring Lands

Find Turkey, Persia, Irak (Mesopotamia), Syria, Palestine, and Arabia on the map of figure 107. This region is generally referred to as the Near East. German statesmen and business men saw in the region called the Near East almost boundless opportunities for trade.

In Turkey and the neighboring regions are important coal and iron deposits and forests with great growths of valuable timber.

The soil of the Mesopotamian valley, especially near the Tigris and Euphrates rivers, is rich and fertile, and, if properly irrigated, it could be made to bear crops in abundance. In the early 1900's European newspapers carried the headline More Oil found in Mesopotamia! Immediately the oil men of every country wanted to secure control of trade in that region.

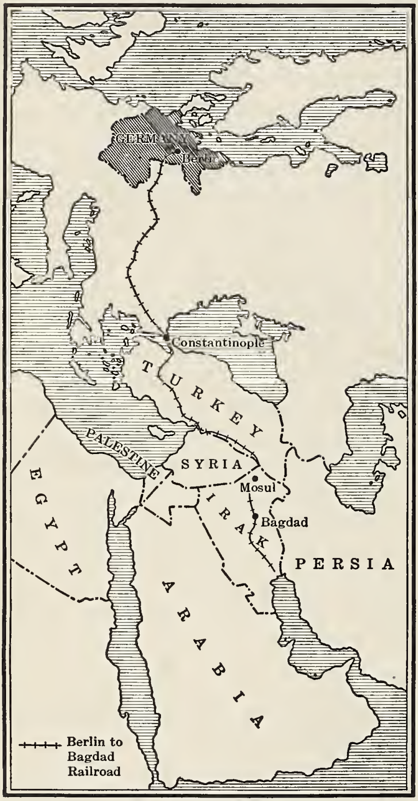

Fig. 107. So anxious was Germany to secure the trade of the Near East that she planned and partly completed the Berlin to Bagdad Railroad indicated on this map

A German diplomat once said, "If one can speak of boundless prospects anywhere, it is in Mesopotamia."

From the early 1900's, then, Germans began to cultivate these "boundless prospects." German scientists and agriculturists found that the soil could be irrigated and made to grow fine crops of wheat and cotton. German industrial leaders saw that mines could be opened to produce much coal and iron for manufacturing and that factories could be built to turn the raw materials, iron and cotton, into the finished products, steel and cloth. Along the coast of countries which bordered this portion of the Mediterranean natural harbors could be transformed into busy shipping ports; and if railroads were built to connect these ports with other parts of western Asia and with Europe, vast wealth could be got from this region.

The millions of people in the Near East could doubtless be persuaded to buy the German cotton goods, which could be manufactured very cheaply in that region. The native people could be hired to work in the new factories very much more cheaply than labor could be hired for factories in Germany. Farm machinery could be manufactured there and used on the farms of the region.

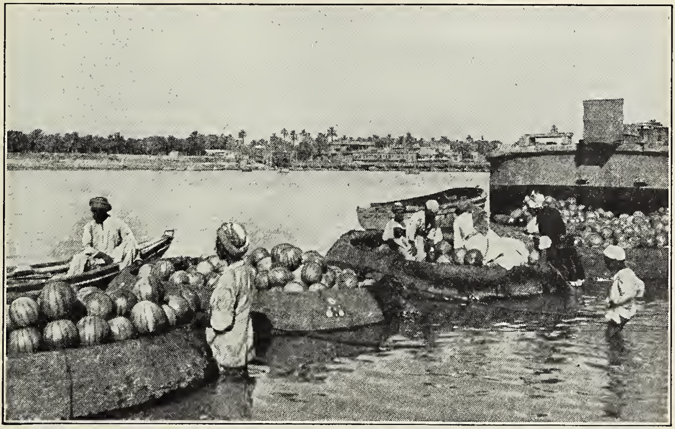

Fig. 108. Bagdad, on the Tigris River in Mesopotamia, was a source of valuable trade to Germany. Food, cotton, coal, oil, and iron are among the exports of Mesopotamia. In this picture the natives are seen loading their round boats with melons for shipment

Not only would the development benefit the wealthy German traders in the Near East, but it would also supply a new market for German machinery, railroad equipment, clothing, and building materials.

Germany also planned to build the Berlin to Bagdad Railroad

You have doubtless heard of the great plan the Germans laid for building the Berlin to Bagdad Railroad. Look at the map of figure 107 and see how much territory this railway would cross.

We have already seen that railways are necessary to industrial countries to transport food, raw materials, and manufactured goods from one place to another. But they are also necessary in undeveloped countries to carry out raw materials and carry back manufactured goods.

The Germans saw what a tremendous advantage a railroad would be. It would connect the very heart of an undeveloped region — the Near East — with their own country. The railroad would be a good source of profit in German exports and imports.

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FIG. 109. A market scene in Istanbul, a rich trading city along the ancient "Royal Road." Whatever nation controls Istanbul commands much of the trade between Europe and the Near East

Note that the railroad runs from Berlin through Istanbul (Constantinople), Turkey in Asia, Syria, and by way of Bagdad in Irak very nearly to the Persian Gulf. North and south of Mosul the railroad has not yet been completed. This is the famous Berlin to Bagdad Railroad.

The route followed by the German engineers was not a new one. It was a trade route 30 centuries old. The track followed the old land route between Europe and the Far East — India and other Asiatic countries.

This land route is a natural connecting link between Europe and Asia. It was probably the oldest trade route in the world — so important that it was called the "Royal Road" between Europe and "the Indies." Long before the birth of Christ, Persia, Babylonia, Assyria, and other historic kingdoms were trading with India and the Far East over this pathway. In the 1100's many of the crusaders of northern Europe crossed to the Holy Land by this way.

This ancient route wound overland through Persia, followed the valleys of the two great Mesopotamian rivers, the Tigris and the Euphrates, and entered the cities of Babylon and Bagdad. Then, passing the larger cities in Syria and Palestine, it went through what is now Turkey to Constantinople. In the early days, when the Royal Road was the world's great trading route, the important cities of Bagdad and Damascus and the Mesopotamian region were as important to commerce as New York and London are today.

Nor was Germany the first and only country to want the control of this route. At one time or another most of the European and Asiatic nations have wanted to possess this territory. Mesopotomia itself has always been a sort of key to the Far East because of its central position, near Persia, Arabia, and Syria, and not too far from India.

You can appreciate, therefore, how shrewd were the Germans who planned to make this ancient trade route available for the use of a modern nation.

Germany's plans for the Berlin to Bagdad Railroad and her empire-building in the near East were opposed by Great Britain and France

German traders had found British and French business men unfriendly toward her in Africa. They had met this opposition in every continent where the German Empire was spreading.

Great Britain particularly opposed Germany's schemes in the Near East. She feared that the Germans might come too near to her trade route in the Mediterranean countries and in India.

That England had good reason for this anxiety you can see by studying the map of figure 107. The Berlin to Bagdad Railroad ran only a few hundred miles from the Suez Canal. If completed, the railway would join the Persian Gulf to Germany, giving the

Germans a rapid land route to western Asia. From the harbor of Kuwait, in Arabia, which was the proposed terminus of the railroad, German ships could carry goods and raw materials quickly up and down the Persian Gulf and through the Arabian Sea and Indian Ocean to the Far East. Thus British statesmen thought that the completion of the railroad would help the Germans to take from them the trade of the Far East.

There were other reasons why Great Britain opposed Germany in Mesopotamia. For one thing, England herself wanted the oil in Mesopotamia. Her merchant ships, her naval vessels, and even her factories were beginning to burn oil instead of coal. There were no oil fields either in England or in her possessions so rich as those in Mesopotamia, and British oil men investigated every region where oil was to be found. They were eager to conquer or buy land all over the world which might add to their oil supply.

So during the very years that German business men were making careful plans to gain control of trade in Mesopotamia, Persia, and other parts of the Near East, British business men were doing likewise. The French too knew the value of these lands, and their business men were no slower than the British and the Germans to take advantage of the opportunities.

By 1900 the three leading European industrial nations were dangerously near to war over these and other lands in Africa and Asia. Wherever Germans went looking for trade and colonies, they found the British and French already established. This had happened in Africa and Asia, and now these same rivals were threatening German plans in the Near East.

You will learn in a later chapter how this rivalry between the industrial nations of Europe became one of the important factors of the greatest war of history, the World War of 1914 to 1918.

Germany's Remarkable World Trade

Her efficient ways of selling goods

The British people are often called "a nation of shopkeepers," that is to say, traders. Of course every industrial nation is that; but the Germans, although they started later, beat the British and other traders at their own game.

As you know, the German factories did not begin to make goods by power-driven machines until the later 1800's. Once started, however, their businesses grew rapidly, and, as we have seen, an enormous trade was developed with every part of the world. German salesmen visited the cities of both near and far corners of the earth. They took orders for goods right in the cities of their rivals — France and England — and in the other neighboring countries as well. They traveled out to China, India, North America and South America, and Africa. They sold German goods wherever they went.

In some ways these German salesmen proved better than those of other countries. They had skillful ways of inducing foreign peoples to buy their goods. For example, they made careful studies of the tastes of different foreign peoples, and then their companies tried to make goods which would be just what these people wanted.

Buyers in Africa, for example, might not like the same colors and designs in cloth as those in Germany, or those in Africa the same shades and patterns as those in China. Instead of making a cloth of colors and designs which Germans or other industrial people preferred, and then persuading people to buy it, the Germans found out first what their buyers preferred. After the German salesmen discovered what their customers desired, they had samples of materials made up in the home factories. These samples were then submitted to the customers, and of course they were more than willing to buy the thing which pleased them.

This is the method used by many companies today, but in the 1890's and early 1900's it was a new way to sell goods. The salesmen of other countries were following a different method. An English consul remarked, "The English manufacturer always lives in the belief that his customers are glad to take what the manufacturer likes, not that he should supply them with what they desire." This was true of all the countries which were trying to trade with foreign peoples.

The German plan for studying the tastes of buyers and manufacturing what they wanted does not seem original to us today; but when Germany introduced it, it gave her a great advantage over other trading countries.

So successful were German business men in foreign countries that before 1900 the British traders found their trade disappearing from under their very noses. This was true of trade inside the other European countries as well as that with far-off colonies. Everywhere German goods were taking the place of British manufactures. In 1897 a British official in France wrote:

> Our market is overrun with German hardware and toys; the shopkeepers [here in France] buy nothing in England. At the big bazaar where I asked the reason for this, the manager handed me articles in wood . . . made in Germany from models he had given and in sizes suited to the taste of the population, with views of Cherbourg and scenes from Norman history.[1]

It is very clear why the shopkeeper bought the German goods. They were cheaper, they had been made from models which the shopkeeper had furnished the German manufacturers, and they were decorated with scenes dear to the hearts of the *French* people. Of course, the French people would buy such goods rather than those of other foreign manufacture.

Another historian who studied this German world trade very carefully said:

> Articles "made in Germany" . . . have driven other goods from many fields. One sees this right in Europe. . . . In my home in Paris the elevator is German, electrical fixtures are German, the range in my kitchen is German, the best lamps for lighting are German. . . . My cutlery is German, my silverware is German, the chairs in my dining room are German, the mirror in my bathroom is German, some of my food products are German, and practically all of the patented drugs and some of the toilet goods are German. . . . All these things have been purchased in the Paris markets without the slightest leaning toward, or preference for, articles coming from the Fatherland. I was not aware of the fact that I was buying German things. They sold themselves. . . .[2]

This study of the customer's needs was one of the reasons, therefore, for Germany's great success in world trade.

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[1] Adapted from Charles Seymour's *Diplomatic Background of the War* (Yale University Press, New Haven, 1916), pp. 72–73.

[2] Herbert A. Gibbons, *The New Map of Europe*, pp. 49–50. The Century Co., New York, 1914.

So Germany's World Trade developed rapidly after 1890

As German industries grew German goods were made to compete with the finest machine-made goods of other countries. Before 1900 German factories were making cloth, tools, machines, dyes, cutlery, silverware, furniture, and countless other products of high quality. Hard-working, highly trained, and capable salesmen were selling these goods in North America and South America, in Africa, in Asia, and all over Europe.

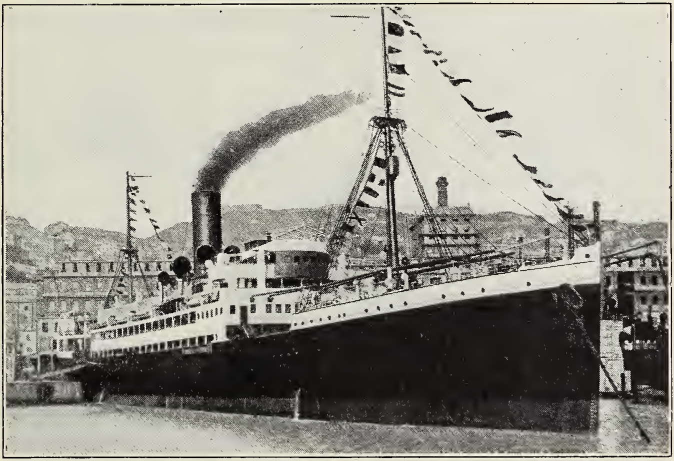

Fig. 110. A German ship in an Italian port. By 1914 German ships like this visited all the large ports of the world, exchanging manufactured goods largely for raw materials and some manufactured goods

Germany was unusually well situated for trade with the entire world by sea as well as by land. Look at the colored map of Europe, following page 328. Notice the long indented coast line of Germany. Compare it with that of the Netherlands and Belgium. Note the many harbors, especially the great ones of Hamburg and Bremen. These ports are conveniently near the heavy bands of ocean traffic, and German harbors are important points on the paths of ocean commerce.

It was only natural, therefore, that Germany should also develop a great shipbuilding industry. This began about 1884, and by 1905 Germany was well able to compete with England in shipbuilding as well as in her ocean trade.

The German merchant marine grew rapidly, and Germany's trade in the Atlantic, in the Pacific, through the Suez, and around Cape Horn increased at an astonishing pace.

The increase in shipping in the single German harbor of Hamburg is typical of what was happening all over the German Empire.

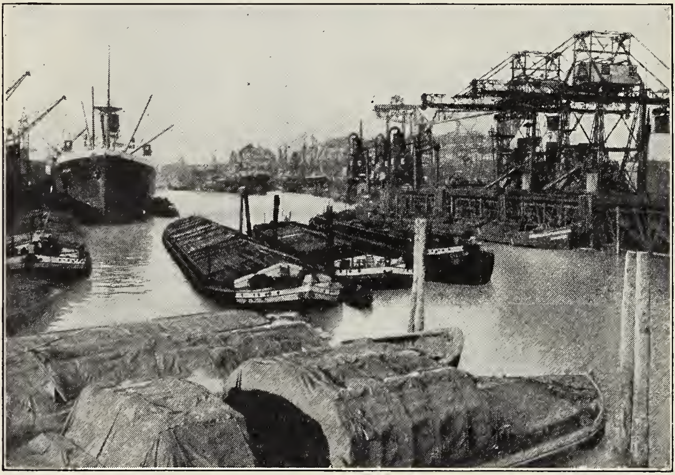

FIG. 111. A part of the busy port of Hamburg

Hamburg was an old trading town of the Middle Ages. But as the years passed its trade and ships declined, until in the early 1800's they amounted to very little. However, by 1880 Hamburg owned steam vessels amounting to 99,000 tons. In just twenty years the tonnage had increased almost eight times. By 1914 it had increased about sixteen times. Hamburg grew so rapidly as a great world port that in 1910 the entire merchant marine of France was less than that of Hamburg alone.

The Germans built modern vessels, deepened their harbors, and handled goods efficiently with machinery. They manufactured goods more cheaply and sold them more cheaply than did the British, the French, or the Americans.

In 1910 Germany bought from other countries and sold to them three times as much as she did in 1870. This huge increase had occurred in 40 years.

The graph of figure 112 shows how she increased her merchant marine to take care of this rapidly growing trade. Though Germany's colonial empire was insignificant in size compared with that of England, she had obtained a vast world trade. She had shown that trade could be secured by efficient methods of manufacturing and clever salesmanship. She had demonstrated that to build a world trade if an industrial country had sufficient supplies of coal and iron, she need not build up a great empire. Her trade spanned the globe in 40 years largely by a peaceful conquest, a conquest achieved by means of new and better methods of manufacturing and selling goods. In 1914 Germany was reckoned a world power and a great commercial rival of Great Britain and France.

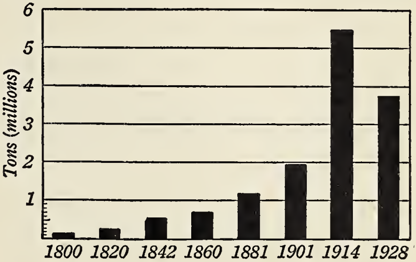

FIG. 112. The shipping tonnage of Germany's merchant marine, 1800–1928. Notice the remarkable increase until 1914

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

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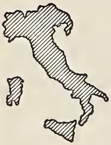
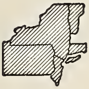
UNIT VI

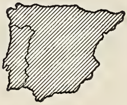
THE AGRICULTURAL COUNTRIES OF EUROPE



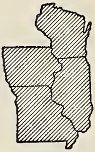
Italy
Population, 41,168,000



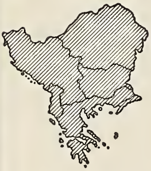
New York, Pennsylvania,
New Jersey, Vermont,
Connecticut
Population, 28,227,000



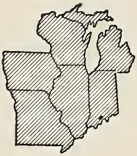
Spain, Portugal
Population, 28,636,000



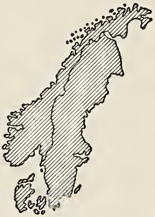
Wisconsin, Illinois, Iowa,
Missouri
Population, 16,670,000



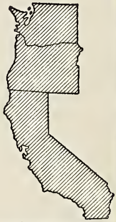
Yugoslavia,
Rumania, Bulgaria,
Turkey in Europe,
Albania, Greece
Population, 45,325,000



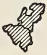
Wisconsin, Michigan, Iowa,
Missouri, Illinois, Indiana
Population, 24,751,000



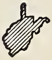
Norway, Sweden,
Denmark
Population, 12,350,000



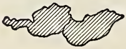
Washington, Oregon,
California
Population, 8,194,000



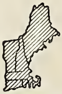
Belgium, Netherlands
Population, 15,726,000



West Virginia
Population, 1,729,000

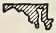


Austria, Hungary
Population, 15,290,000



New England
Population, 8,166,000

Switzerland
Population, 3,018,500



Maryland
Population, 1,632,000

THE AGRICULTURAL COUNTRIES OF EUROPE

In the preceding chapters we have studied three of the leading countries of Europe — Great Britain, France, and Germany. These countries were the first to turn to machine manufacturing and, like the United States, to become known as *industrial* countries. They form only a small part of Europe, however. Their areas combined — about 480,000 square miles — constitute only about one eighth of the land area of that continent, and their 147,000,000 people make up approximately a third of the population. Nevertheless, just before the World War these countries were three of the leading powers of the world. Each had built up a thriving world trade and a world empire. *These small countries actually governed one half of the earth's surface and one third of its people.*

But Europe now contains at least 27 countries,— the Irish Free State and several other small areas are not included in this number, — and so more than twenty other countries have not been considered. Did all these change, as the "big three" did, from small medieval states to strong industrial countries? Were the three principal countries typical of all Europe?

There is not space to tell the chief characteristics and to outline the history of so many different lands and peoples. We should remember, however, that each country differs from its neighbors in many ways,— for example, in customs, in history, and in language. Although these other countries have not played such an important part in the modern world as have Great Britain, France, and Germany, each is important and interesting in itself. They are all independent, and the people of each one love their country and are proud of it.

1. The extent to which European countries are industrial

The chart gives the names of the 27 countries divided into four groups: first, powerful industrial countries; second, partially industrialized countries; third, small agricultural countries

COUNTRIES OF EUROPE (1929) GROUPED ACCORDING TO THE EXTENT TO WHICH THEY HAVE BEEN INDUSTRIALIZED

I. THE POWERFUL AND HIGHLY INDUSTRIALIZED COUNTRIES

1. Great Britain
2. France
3. Germany

II. PARTIALLY INDUSTRIALIZED COUNTRIES

4. Belgium
5. Italy
6. Hungary
7. Austria
8. Switzerland
9. Netherlands
10. Czechoslovakia

III. AGRICULTURAL COUNTRIES WITH LITTLE MACHINE MANUFACTURING

A. Countries of the Iberian Peninsula

11. Spain
12. Portugal

B. Countries of the Balkan Peninsula

13. Yugoslavia
14. Albania
15. Greece
16. Turkey in Europe
17. Bulgaria
18. Rumania

C. The Scandinavian Countries

19. Denmark
20. Sweden
21. Norway

D. The Baltic Countries

22. Poland
23. Lithuania
24. Latvia
25. Estonia
26. Finland

IV. POWERFUL AGRICULTURAL COUNTRY

27. Russia

with little machine manufacturing; fourth, a powerful agricultural country (with very little machine manufacturing) — Russia.

We have grouped the countries of Europe so as to show whether or not they have taken up machine manufacturing to any great extent. They have been grouped in this way to help you to think clearly about them. There are so many countries, each with its own characteristics, that almost no person can really understand them all. It will help you to understand them, however, if you remember the likenesses and differences among them.

The chart reminds us, first, of what we have already learned, that in three countries — Great Britain, France, and Germany — the use of power-driven machines, railways, steamboats, electrical communication, etc. is widespread.

Second, that seven small countries have begun to manufacture with machines in their larger towns and cities and to depend upon the exchange of food, raw materials, and manufactured goods with other countries. Belgium has done this much more than any of the others.

Third, that sixteen of the European countries are small farming-handicraft countries that make very little use of machine manufacturing.

Fourth, that there is a huge agricultural country, Russia, in which coal and iron are mined, oil is produced, and, in a few larger cities, goods are manufactured in factories.

Try to think of the countries of Europe, therefore, in terms of the degree to which they have become industrialized.

2. The area of the less powerful European countries

It is said that an American railroad conductor used to poke fun at the smallness of Rhode Island by announcing, as his train stopped at Providence, "Rhode Island! Rhode Island! Leave by the middle car!" The joke applies to many European countries also. Some are so small that it seems as though a train would almost reach across them!

Most of the countries of Europe are, indeed, no larger than the separate states of the United States.

See how clearly this fact is brought out in the map given on page 264! (1) Belgium and the Netherlands together are only as large as our state of West Virginia. (2) Switzerland matches Maryland in area. (3) Italy, one of the larger countries, is about as large as the combined areas of the five states of New York, New Jersey, Pennsylvania, Vermont, and Connecticut. (4) The six Balkan countries taken together have an area equal to the combined areas of the six Middle Western states of Michigan, Wisconsin, Indiana, Illinois, Iowa, and Missouri. (5) Spain and Portugal together are about the size of Iowa, Missouri, Wisconsin, and Illinois. (6) Norway, Sweden, and Denmark combined are about the size of our three Pacific-coast states of Washington, Oregon, and California. (7) Austria and Hungary are now about the size, respectively, of Maine and Indiana.

3. The population of the less powerful European countries

Even though the European countries are small in area, they are densely populated, on an average three times as densely populated as our states. Europe, with one third more land area than the United States, has more than three times as many people. Some of the countries have twenty times as many people to the square mile as do our typical states. People are crowded together indeed in Europe.

One seventh-grade pupil, after studying the map of Europe and comparing European countries to our states, exclaimed, "The United States of Europe! That is what they look like. They ought to combine and form one great country." That is exactly the opinion of some excellent students of European civilization. Although the countries of Europe, except Russia, already belong to the League of Nations, the plan has been proposed in books and magazines and discussed in debates that the nations of Europe should unite into a closer union, forming the United States of Europe. Many people think that at some future time such a result may be brought about.

4. Suggestions concerning your further study of the small agricultural countries of Europe

In Chapters XI and XII we shall study the largest agricultural country of Europe — Russia. However, many of the smaller countries should also be studied. In view of the limited time, you might carry on the study of those countries by dividing the class into committees. Have each committee make a study and a report of one group of countries. (See the *Workbook for Changing Civilizations in the Modern World*, Problem A.)

In doing so, look for the ways in which these smaller European countries are alike. Note, for example, how few of them have really taken up machine manufacturing to any large extent. Note which ones have large deposits of coal and other fuel resources. Note how much iron ore is to be found within their boundaries. Ask whether each one has a large merchant marine, whether it trades much with countries outside of Europe, and whether it controls colonies. Some of these smaller countries do have many merchant vessels and fairly large navies; several control colonies in Africa and in Asia. Facts for some of the countries will be found in the Appendix.

In making your reports upon various countries, note especially the extent to which their "geography" has determined their occupations, the ways in which they work and play. For example, inquire concerning the "lay of the land," rainfall and temperature, fertility of the soil, rivers and other means of transportation, forests and other examples of vegetation. Have each committee make a brief report also on the history of each country or group of countries. Remember that it is only through the understanding of the historical development of a people that one can understand the people themselves.

5. We shall study carefully only one European agricultural country — Russia

To carry out the plan of this book we shall next study one of these agricultural countries — Russia. Russia is the largest and the most populous country of Europe. It is a land huge and mysterious, for centuries almost unknown to the other peoples of the world. Russia is a vast inland empire, stretching across one continent and far into another. It has played a very important part in European history.

The Russian people, furthermore, are good representatives of the millions of other Europeans who live in central and southeastern Europe. Remember as you read the story of how the people of this great country live that millions of other people are still living in Europe in about the same way.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

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DE KÖVËR, H. T., STOKES, ADRIAN, and STOKES, MARIANNE. Hungary (Peeps at Many Lands Series). The Macmillan Company, New York, 1912.

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"Vienna — a Capital without a Nation," *National Geographic Magazine*, January, 1923, pp. 77–102.

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"Through the Back Doors of Belgium," *National Geographic Magazine*, May, 1925, pp. 499–540.

"Czecho-Slovakia, Key Land to Central Europe," *National Geographic Magazine*, February, 1921, pp. 111–156.

"Denmark and the Danes," *National Geographic Magazine*, August, 1922, pp. 115–164.

"'The Glory that was Greece,'" *National Geographic Magazine*, December, 1922, pp. 571–630.

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"The Story and Legends of the Pontine Marshes," *National Geographic Magazine*, April, 1924, pp. 357–390. Deals with Italy.
"Holidays among the Hill Towns of Umbria and Tuscany," *National Geographic Magazine*, April, 1928, pp. 401–466. Deals with Italy.
"Dalmatian Days," *National Geographic Magazine*, January, 1928, pp. 47–90. An article on Yugoslavia.
"Latvia, Home of the Letts," *National Geographic Magazine*, October, 1924, pp. 401–443.
"Norway and the Norwegians," *National Geographic Magazine*, June, 1924, pp. 647–696.
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"On the Bypaths of Spain," *National Geographic Magazine*, March, 1929, pp. 311–372.
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CHAPTER XI

RUSSIA: A VAST EMPIRE PEOPLED BY PEASANTS

A Russian writer of the 1800's once said of his country, "Yes, indeed, I both love and hate my Russia, my strange, sweet, nasty, precious country."

He pictured his homeland as neither European nor Asiatic, a great borderland between the East and the West. To the European or American visitor it is like a country of medieval Europe. The mass of the people in peasant smocks till their fields with old-fashioned tools. These peasants in the villages make pottery, toys, rugs, and embroidery which are not like those of any other country.

The peasants are strong, rugged, hardy people. Many of them are dark and as straight-haired as the Chinese. Years ago when western Europeans knew Russia only as a vast, silent, mysterious land, Asiatic peoples conquered the Russians and settled the land. They have left their traces among the people to this day.

Today all the world talks of this strange Russia, but few people understand her.

How Large is Russia?

Russia[1] is a tremendous inland empire, larger than any other country in the world. It is the only country in the world that stretches across one continent and a long distance into another. It is so large that we have been used to speaking of "Russia in Europe" and "Russia in Asia."

Russia is

(1) nearly 21 times the size of France and Germany combined;
(2) over twice the size of Europe without Russia;
(3) nearly three times the size of the United States;
(4) nearly twice the size of China;
(5) about one seventh of the total land area of the earth.

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[1] In this book the word "Russia" is used to mean the entire Union of Socialist Soviet Republics. Russia proper is only part of this vast area.

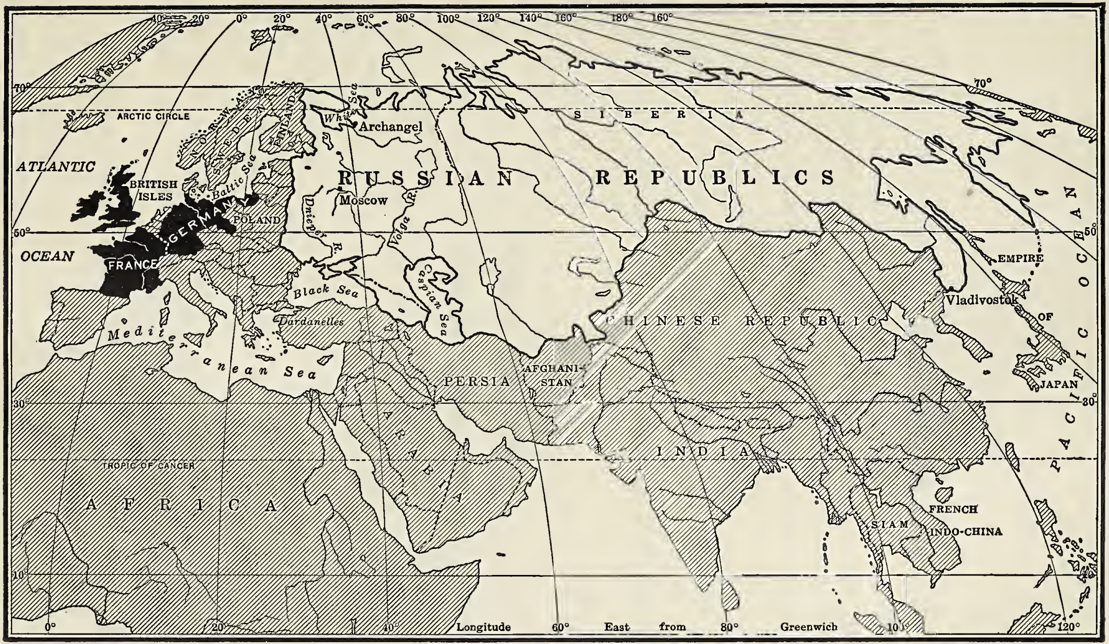
ATLANTIC
OCEAN
ARCTIC CIRCLE
BRITISH ISLES
NORWAY
SWEDEN
FINLAND
Baltic Sea
GERMANY
POLAND
FRANCE
White Sea
Archangel
Moscow
Dnieper R.
Volga R.
RUSSIAN REPUBLICS
SIBERIA
Black Sea
Dardanelles
Caspian Sea
Mediterranean Sea
PERSIA
AFGHANISTAN
ARABIA
CHINESE REPUBLIC
INDIA
SIAM
FRENCH INDO-CHINA
EMPIRE OF JAPAN
Vladivostok
PACIFIC OCEAN
AFRICA
TROPIC OF CANCER
70°
50°
30°
10°
40°
20°
0°
20°
40°
60°
80°
100°
120°
140°
160°
180°
160°
Longitude East from Greenwich
0°
20°
40°
60°
80°
100°
120°

Fig. 113. The extent of the Russian Republics. Compare the area with that of the British Isles, France, and Germany

Not only is Russia large in territory; it is large in population also. *It has as many people as Great Britain, France, and Germany combined.* The graph below shows how these countries compare with Russia in area and population.

HOW DID THE RUSSIAN EMPIRE BECOME SO LARGE?

To answer that question we shall turn the history clock back several hundred years and see how the Russians spread out over the land in all directions toward the seas.

Long ago in the ninth century, when most of the people of western Europe and England were settling down to manor life, the people whose descendants are now called Russians lived in the valley of the Dnieper River. They were few in number and had settled in but one fifth of all the territory that is now European Russia. They were primitive people, who farmed little plots of ground with rude implements.

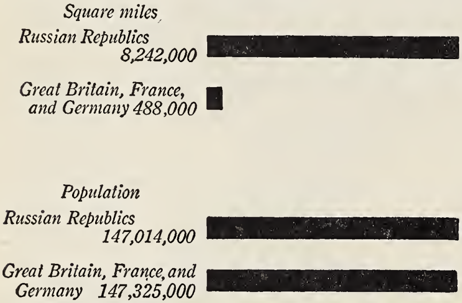

FIG. 114. These graphs show the area (top) and the population (bottom) of the Russian Republics as compared with Great Britain, France, and Germany

Around them were other primitive tribes — forest people. To the east were the tribes of the vast Asiatic plains — the dreaded Mongols, or Tartars. On the west were "German" people, who also lived in tribes. To the north were the Vikings — the sea rovers. At the south was Byzantium, which we now call Istanbul. This rich city, capital of all that remained of the Roman Empire, was the home of many races of people.

The early Russians knew little about their neighbors. Of course there were no railroads, telephones, telegraphs, or wireless; there were not even good roads. So for hundreds of years these people lived with very little knowledge of what was going on throughout the rest of Europe.

For transportation they depended mostly upon the broad rivers that cut across the great plain of eastern Europe. Greatest of all these rivers was the Volga. Note on the map of figure 113 the great length of the Volga River, which runs from northern Russia down to the Caspian Sea. There was the Don River also, and the Dnieper and the Dvina, as well as many small tributary rivers.

When these peaceful, agricultural folk desired to move to other plots of ground, they packed up their few belongings and in crude barges floated their families down one of the broad, brown rivers. Having arrived at a new place which seemed to promise good crops, they would again build their houses and begin to cultivate the earth.

Russia, you see, like America, had pioneers too. As they increased in number they settled larger and larger areas of the country, gradually spreading out over the plains of eastern Europe until they covered most of what we now call European Russia.

About 1000 Years ago Armed Norse Traders conquered and ruled these Simple People

In the Far North on the Scandinavian peninsula lived a warlike and roving people called the Norsemen. You have probably heard of them before and of their conquest of England and of their conquests in the lands which are now France and Germany. They even crossed the Atlantic and explored Greenland and the north coast of America long before Columbus.

Many of the bold Norsemen were traders, carrying goods to and from far parts of the world. Like the peoples of southern Europe they traded

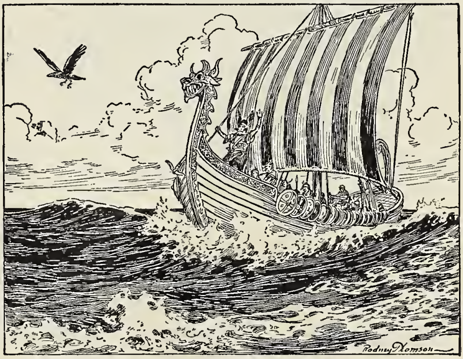

Fig. 115. The Norsemen, sailing from the Scandinavian peninsula through the Baltic, discovered a trade route through eastern Europe to Byzantium

with the merchants of Asia, and in their travels they found an excellent way of going from their native Scandinavia to Byzantium (Constantinople), where they could trade their goods for the riches of Asia. This course, or *trade route*, as we call it, ran almost north and south through the eastern plains of Europe. It was not an ocean route, and it was really not a land route. What was it?

The "water route" of the Norse traders

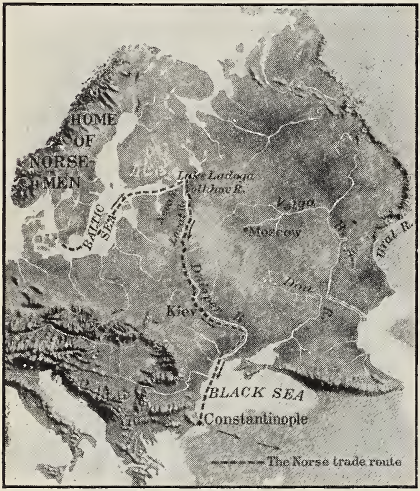

Fig. 116. The route to Constantinople used by the Norse traders

You can see on the map how they sailed their ships across the Baltic Sea to the Neva River, then up the Neva to Lake Ladoga, then up the Volkhov and the Lovat rivers as far as ships could go. At this point they were on the high land of that region. They disembarked and crossed over by land to the Dnieper River, launched their boats and sailed down to the Black Sea, and on to Constantinople.

The Norsemen had discovered this route, and they regarded it as their own. They carried their spears and swords with them, and they took bands of fighting men on their ships. If people along the way did not behave to suit them, they proceeded to subdue them by warfare. As there were no roads or railroads, this water route was the main highway of the north. To control it meant to have practically a monopoly of all trade. The Norsemen did not get any charters or form any companies. They set about protecting their interests very simply, — by building forts along the way, — and when the route was thus made secure they set out to conquer the country round about.

A trade center, Kiev, grew up on this water route

The Norsemen even undertook to build towns along the rivers. The most important of these towns was Kiev. Find it on the Dnieper River, about halfway between Moscow and the Black Sea. You see that it is on an almost straight line from Scandinavia and Lake Ladoga to Constantinople. During the 800's the Norse princes of Kiev became the rulers of this great territory.

The region around Kiev was a troublesome place

Kiev was a place so located as to attract roving warriors, and a great deal of fighting went on to gain control of this trading center. Moreover, everybody wanted to own land in the rich farming district along the banks of the Dnieper. The various native peoples too were constantly fighting among themselves to possess the region.

Then, about 1200, a race of fierce warriors called Mongols, or Tartars, invaded Kiev. They had lived far to the east of Russia, in southern portions of present-day Siberia and in the northern part of the present Chinese Republic. During the years following 1200 these people set out to conquer the world. They took China, India, Persia, and thence spread through all of Russia, Hungary, and the Balkan countries. The emperor of the Tartars, called the Grand Khan, forced all conquered peoples to pay him rich tribute and heavy taxes. His soldiers were cruel and bloodthirsty.

To get away from these Tartars the princes of Kiev and others of the Russians moved away from this district during the years of invasion to places not so inviting to conquerors nor so easily accessible to tribute-collectors.

Moscow became the leading city of Russia

North of Kiev was a place surrounded by swamps and by forests — a place harder to reach than the rich valley of the Dnieper. Find this region, called Moscow, on the map. Many people went to this region.

Here they were not so well placed for trade with the Black Sea as they had been, and their farm land was not so rich; but they were freer from the control of the Tartars.

While other cities were being conquered by the Tartars, Moscow, in the middle of swamps and forests, escaped many of the destructive invasions and continued to grow. So powerful did the Muscovites (men of Moscow) become that after about 100 years they were able to defeat the Tartars and drive them back to Asia.

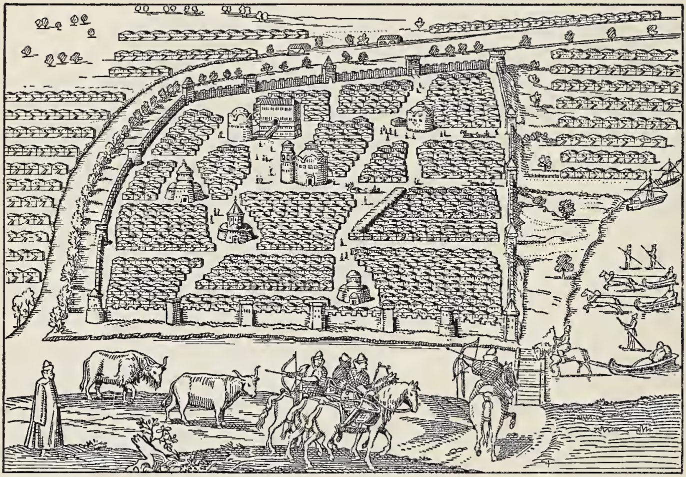

FIG. 117. Moscow about 1600. The wall which surrounded it was built to protect the city from enemies. (Redrawn from an old print)

After the Tartars had been driven away the princes of Moscow began collecting the various regions of Russia under their government. Their position in the center of a great country was now a help to them in adding to their possessions on all sides. Although not so fortunately located for trade as Kiev, Moscow nevertheless had some advantages. It was on a tributary of the Volga, which led to the Caspian Sea, and it was not far from the headwaters of the Don and the Dnieper rivers, which led to the Black Sea.

Moreover, rough overland roads were being built in Russia. And the Muscovites saw to it that these roads went to Moscow, for that meant more trade for them. The city grew and grew, and the princes of Moscow, wealthy and powerful, became known throughout Europe by reason of their lavish entertainment of ambassadors from other countries.

There came a time late in the 1400's when a prince of Moscow set himself up as the Czar (emperor) of all Russia. From then until 1917 the rulers of Russia were called Czars (or Tsars). The Czars of Russia were very autocratic men; that is, they had almost complete control of the Russian government and either killed or exiled anyone who opposed them. For over 400 years these rulers made the history of Russia and controlled absolutely the lives of the people.

After 1500 the Russian territory spread until it comprised a huge empire

When the Muscovite princes turned their attention to building up a more powerful empire, did they use the same methods as those used by Great Britain, France, and Germany? Did they send out ships and traders to far parts of the earth and bring other peoples under the rule of the home country?

No. The Russian Empire grew from a little beginning by gradually taking in surrounding territory. Professor Gibbons tells a story which illustrates how it was done.

"'Papa,' said my eldest daughter, her eyes wide with enthusiasm, 'I have found out how to make a big snowball, the kind of snowball that gets so large you have to ask other kids to help you roll it.'

"'Found out? Was there anything to find out about making a snowball? Didn't you just make it?'

"'Oh, no,' she explained. 'But I know now. You mustn't try to bring the snow to the ball. You have to start in one place and keep rolling all around, and that's the way your snowball gets big.'"[1]

The Russian Empire grew somewhat like the little girl's snowball. The real starting-point was Moscow. During a short period of peace with their Tartar rulers the Moscow princes began to subdue peasant peoples in the regions around Moscow. Later, after getting rid of their Mongol conquerors, they sent their bands of warriors farther and farther away from the home city to conquer new groups. Before 1700 they had included within the empire of Russia practically all the peoples of eastern Europe.

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[1] Herbert A. Gibbons, *The New Map of Asia*, p. 308. The Century Co., New York, 1919.

For 400 Years Russia's Rulers tried to extend the Empire in All Directions toward the Seas

From the time when the primitive Europeans lived in eastern Europe until after 1700 *Russia had no ocean ports* except the ports on the White Sea. Because these were frozen over for eight months of the year, it was difficult for Russian people to trade with other countries.

More than all else the Russians wanted ports on the southern seas. *This desire to gain "warm water" ports became the ruling passion of the Russian Czars.* They carried on wars with the people around them year after year, century after century, in order to gain them. The map of figure 118 shows how the boundaries of Russia were extended from 1500 to 1900 toward bodies of water which were not frozen over most of the year.

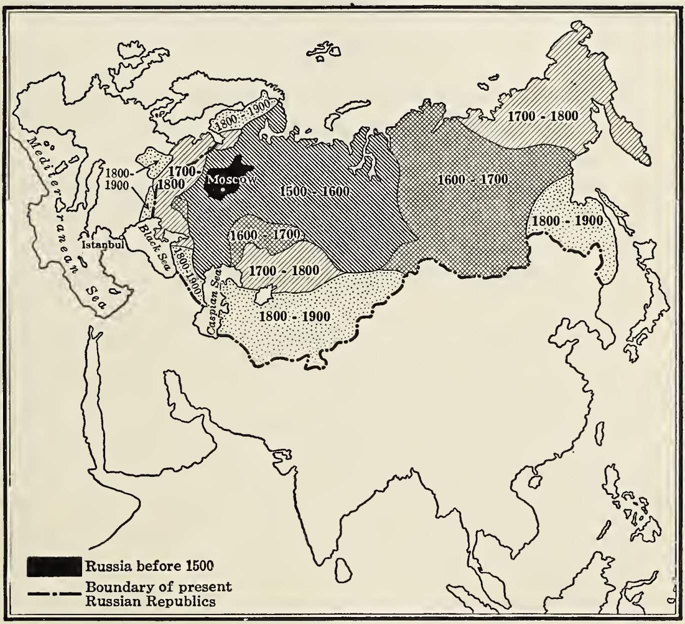
1. First, they pushed their empire west to the Baltic Sea, 1600–1721

The northern Baltic is filled with floating ice in winter, but it is open for a longer period than the White Sea. Russia, therefore, wanted ports on the Baltic because she was very envious of the valuable trade which went on there. But Poland controlled these ports.

Poland was a country of people related to the Russian people. Just as Kiev, and later Moscow, had grown up as little separate governments, so Poland, Lithuania, and other regions had grown up as little separate states. Poland and Lithuania had at last been joined into a single powerful state by the marriage of their rulers; and this state, because it owned territory on the Baltic Sea, was in the way of the growth of the Russian Empire.

For over 100 years after 1600 the Russian Czars tried to get control of ports owned by Poland on the Baltic Sea.

Finally, by 1721, Peter the Great, one of the most famous of the Czars, had secured a strip of land along the eastern shore of the Baltic Sea. This gave the Russian Czars their first coast line south of the White Sea. From Peter's time until 1917 Riga, Revel (Tallinn), and Narva were Russian ports on the Baltic. In getting this strip Peter the Great now controlled the mouths of the Neva and Duna rivers. Do you understand how important a step this was? Thenceforth Russians could transport their goods down these two rivers to their own ports on the Baltic Sea, whence their ships could sail into the North Sea and out into the Atlantic Ocean.


1800 - 1900
1700 - 1800
1800-
1900
1700-
1800
Moscow
1500 - 1600
1600 - 1700
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1600 - 1700
1700 - 1800
1800 - 1900
1800-1900
Mediterranean Sea
Istanbul
Black Sea
Caspian Sea
Russia before 1500
Boundary of present
Russian Republics

FIG. 118. From a small beginning at Moscow, Russia spread in all directions. The dates show the years when these new lands became part of Russia

At last Peter had succeeded in his desire "to open one window on Europe." At last Russia was beginning to realize her ambition to control warm-water ports. But what a long time it had taken to make that beginning! It was now 1721 — nearly 300 years from the time when the princes of Moscow had driven out the Tartars and had begun expanding their empire to the seas. During this time England and France had been sending traders from their ports to many other parts of Europe, to the Americas, and to the Far East. But the Russians were building their empire differently, slowly taking in territory around Moscow and trying to make Russia the center of trade between Asia and Europe.

Peter the Great was a very ambitious ruler. He wished his country to become more like the rest of Europe, and believed that by building up trade Russia would grow rich and powerful like her western neighbors.

He planned to join the Dvina and the Volga rivers by canals, to open new highways from the Baltic to the Caspian, and from these two seas to the Arctic Ocean. On the Baltic he planned to build a new capital for his empire which should be the center of trade between China and Europe. He even planned a northern sea route to Peiping (Peking). He introduced the study of sciences into Russia, founded an academy, and invited great European scholars to teach in it. Little wonder he was called "the Great"!

At last his dream of building a great capital city was realized. The spot selected was at the mouth of the Neva River, at a point connecting inland Russia with the Baltic Sea. At that time it was no more than a swamp, but Peter foresaw that it would be one of the best trading points in Russia and was determined to have his capital city there. Although he knew that the workmen would suffer terrible hardships, he ordered that the city be built. He then decided to call it St. Petersburg,[1] naming it for his patron saint.

First, the swamp had to be filled in. It took whole forests of wood and whole quarries of stone to fill it. There were no modern ways of doing this. The methods of the Russians were even more crude than the methods used by the Egyptians in building the pyramids, and tens of thousands of peasants died before Peter's plan was accomplished. "Like cattle the workmen were herded in these swamps to perish of cold and hunger and scurvy. As fast as they were swallowed up more serfs were driven in. They dug the soil with bare hands and sticks, carrying it off in caps and aprons.

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[1] In 1914 its name was changed to Petrograd, and since 1920 it has been called Leningrad.

With thudding hammers, cracking whips, and groans of the dying, St. Petersburg rose like the pyramids — in the tears and anguish of slaves."[1]

But though Peter's methods were very cruel, he gave his whole life to improving Russia and to awakening his people to the changing life in Europe beyond the boundaries of their own country. He was followed by a line of Czars who also had great ambitions for their country, but who, like Peter, were not often concerned with the health or happiness of the mass of the Russian people.

In 1809 Finland was made a part of the Russian Empire. The Finnish people of course were not consulted. Russian armies merely went into Finland, subdued the people, and compelled them to acknowledge the Russian Czar as their ruler, much as the Norse traders had first subdued the native Russian peasants.

2. Russia slowly expanded southward toward the Black Sea

You remember how Norse traders built up Kiev along a trade route to Byzantium, and how later, when the Tartars had pushed them back, the Norsemen went north to Moscow.

After the Tartars had been driven back to Asia, the Muscovites pressed on. Always through the centuries that followed they kept pushing through the lands to the south, hoping to build up the old trade route. But south of Kiev their progress was hindered by the Cossacks (or "Freebooters"), as the Tartars had called them.

In the 1600's Russians began to conquer this region, and finally they got control of all the land east of the Dnieper River. Slowly, year by year, they took more land until by 1784 the Sea of Azov, which leads directly into the Black Sea, and the land on each side were included in their empire.

But there is a much more direct way to the sea than the passage through the more northern Sea of Azov. This way is through the Ukraine, a region west of the Dnieper and bordering on the Black Sea itself. The soil of the Ukraine is rich and black, and so the region has come to be called the *black-earth* district. *It is the richest wheat-raising region of Europe.* Turn back to the map of figure 92 in Chapter IX. Note the great black spot in southern Russia, which shows the tremendous amount of wheat raised in this region of the Ukraine. Today it is a very rich and valuable part of Russia. In 1793, when Russia had succeeded in conquering it and making it a part of the Empire, its greatest value lay in the fact that it provided a broad pathway to the Black Sea.

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[1] Adapted from Albert Rhys Williams's *Through the Russian Revolution.* Boni & Liveright, New York, 1921.

Meanwhile Poland tried to prevent Russian expansion into her territory, but by 1795 Russia had added to the Ukraine the great eastern portion of Poland. This proved to be one of the most prosperous sections of the Russian Empire.

Thus after centuries of conflict the Russian Empire extended to the Black Sea, which opens into the Mediterranean. *It seemed as if Russia had obtained her goal.*

The ports on the Black Sea were not an outlet for trade

At last the Russian Czars had obtained the route to Constantinople and had extended their empire to warm waters. But they really did not control the sea passage to the Mediterranean and the Atlantic. As you see on the map, figure 113, there is no way out of the Black Sea except through the narrow strait of the Dardanelles into the Mediterranean.

Constantinople controlled and still controls this strait. For hundreds of years the city had been in the hands of the Turks, who did not permit ships to pass through freely, as ships pass through the Strait of Gibraltar. Until the Russian ships could get through the strait of the Dardanelles, the ports on the Black Sea were of little use.

For many years Russia had longed to possess Constantinople, for it was the key to the outside world. If Russia could control Constantinople, she would at last have her warm-water port! Through the Dardanelles her ships could then go down the east end of the Mediterranean and through the Suez Canal to India, China, and Japan; or west through the Mediterranean to the Atlantic.

Russia longed for Constantinople in vain. The rulers of the other leading European countries knew her desire; and as they all feared for their own safety if Russia should gain her "window" on the Mediterranean, they were ready to unite to bottle up Russia.

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FIG. 119. Constantinople (Istanbul) is seen in the background of the picture. This city controls the path from the Mediterranean into the Black Sea

Between 1735 and 1877 Russia fought seven great wars to win Constantinople. But Great Britain, Germany, Austria, France, and Turkey were all watching her, and each time several of them combined against her. She came near to success again and again, but Constantinople never became hers.

3. Russian settlers moved eastward into Asia

Even as early as the 1500's Russian settlers had moved down toward the mouth of the Volga River and had gained a foothold on the Caspian Sea. Note on the map of figure 113 where the river empties into the huge Caspian Sea. Slowly but steadily they moved into the regions between the Caspian and the Black seas (the Caucasus). Sometimes Russian armies went with them, conquering the native peoples and acquiring new lands. By 1830 these provinces of the Caucasus were controlled by Russia.

This pushing out and settling in new land did not seem like empire-building at all. Indeed, it was much like the westward expansion of the people of the United States in the 1800's. There was plenty of land; so when a farmer heard stories of more fertile soil in another province, he simply packed up and moved.

A Russian writer has told us about one of these migrations. His grandfather had lived, not far from Moscow, on a fine estate which the Muscovite Czars had given to his ancestors. Although there was much land, pasture, and timber, this Russian landowner wanted new territories.

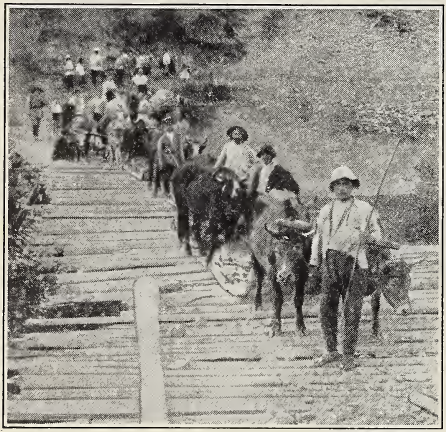
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FIG. 120. These are pioneers or descendants of pioneers who moved eastward into Transcaucasia when it became a part of the Russian Empire

He heard of good lands farther east — fields broad and fertile for cultivating and stock-grazing, and fish and game in plenty. Land could be bought for very small sums. According to the tales told by travelers, one simply invited a dozen of the local chiefs to a banquet, where two or three fat sheep would be provided for the guests, along with quantities of strong drink. The entertainment might last for some time, for the chiefs did not like to be hurried in doing business. Finally, however, a day would come when one of the chiefs would look the stranger in the face and say: "We are obliged to you, little father, ever so much obliged. And now what is it you want?" Then a long and delicate conversation would begin, in which the stranger pretended he wanted nothing; but in the end the land would be bought.

This plan sounded very simple, and in due time the writer's grandfather bought 12,000 acres of land at about a dollar an acre. The new landowner went home full of enthusiasm and made great preparations for moving his family and his serfs. In small groups he moved the serfs, who carried with them their farming implements and began at once to till the soil, which had never been cultivated. It took over a year to transfer all the people from the old estate to their new homes.[1]

Eastward-moving pioneers went into Turkistan

Year by year little bands settled toward the southeast. Some went even as far as Turkistan (the region east of the southern part of the Caspian Sea). It took nearly 150 years, from 1734 to 1881, to make Turkistan a part of the Russian Empire. It was not a rich land, being made up mostly of deserts and ancient towns, with only a scattering of small, rich agricultural regions. Nevertheless many Russians moved out and settled there.

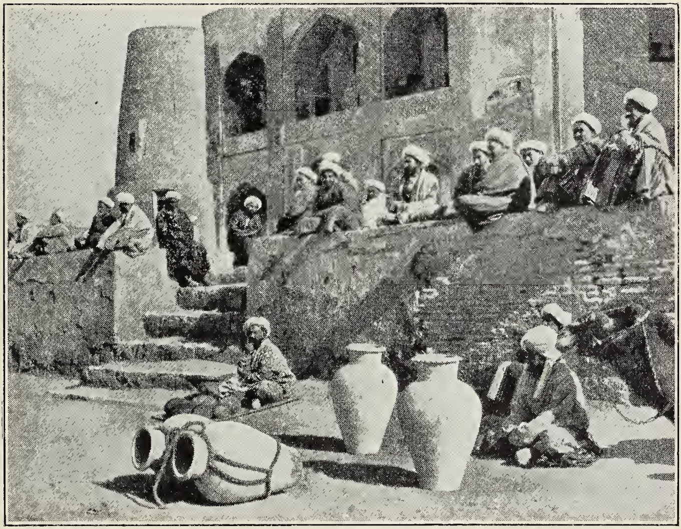

FIG. 121. In front of the mosque in Bokhara. The man sitting on the ground at the right is a water-seller, with his water jars before him

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[1] Adapted from Serghei Aksakoff's *A Russian Gentleman* (Oxford University Press), translated by J. D. Duff. The author was born in 1791. This story is a true account of his grandfather's life. The author's books are widely read in Russia. "At the present time," wrote a Russian man of letters in 1912, "the normal education of a child in Russia is inconceivable unless *Aksakoff's Family History* forms a part of it."

Bokhara in Turkistan was already an ancient town. Today it still seems like an enchanted city of the Arabian Nights. Within its toothed walls over 75,000 Mohammedans live a life completely apart from the rest of the world. Their streets are narrow. There are endless shops. The roads are cobbled, winding in every direction. Sometimes they wander off into alleys and lanes. Sometimes they meet in squares where handsome mosques stand. Water is scarce in this region, and it is sold in small quantities by water-carriers. Stairways lead from some of the squares to cool, tree-shaded pools of stagnant water. These are the city's water reservoirs.

Camels pad clumsily over the cobblestones. Fat Mohammedans urge along meek little donkeys. The many vehicles and animals create traffic problems in the narrow streets. The drivers continually shout "Hagh, hagh!" ("Get out of the way!")

Most of Turkistan, however, was quite unlike Bokhara. It was much more like the arid region of Siberia.

Eastward 5000 miles the Russian Empire expanded across Siberia

Before 1600 the Russians also began to cross the Ural Mountains and penetrate the northern forests of vast Siberia. In 1581 a number of brigands and outcasts formed a band of pioneers who started out across the Urals to make a home somewhere in the wild regions that stretched for thousands of miles to the east. It was not a very orderly gathering. It was made up of Russians, Cossacks, Tartars, and German and Polish prisoners of war, most of them fleeing from the law or from the restraints of Russian discipline. They fought with the Tartars, captured their main town, Sibir, and established themselves. The leader of these hardy pioneers presented to the Czar the lands which they had conquered.

This was the beginning of a great migration. Peasants ran away from their lords to follow the first pioneers. Fortune-hunters followed them, seeking gold and furs. Exiled serfs, sent out by their masters, trailed along in chains. Some went in hopes of riches, some went for adventure, and thousands of outcasts went because they were forced to.

They met no serious resistance from the few native inhabitants. They followed the courses of the rivers and landed and settled where they found inviting places. Many who had been serfs at home or had been oppressed by the Czars found in the vast continent a chance for freedom and some independence.

Europe gave little heed to this conquest and colonization. The process was so gradual that other nations took little notice of it.

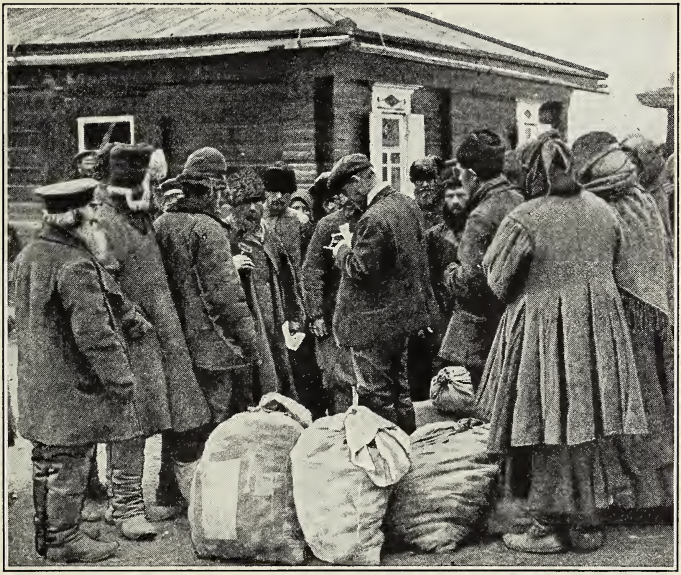

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FIG. 122. Recent immigrants from European Russia to Siberia

Eastward the Russian settlers pushed on, year by year, following the river valleys exactly as our American pioneers who went down the Ohio River, the Mississippi, and other river valleys of our Middle West had done.

Up the great level valley of the Ob River the Russian stream of wanderers moved. There in the early 1600's they formed the settlement of Tomsk. Locate this on the map following page 424. Beyond the valley of the Ob more adventurous pioneers moved on to the Yenisei, lying farther to the east. From the valley of this long and magnificent river they next moved over to the Lena, where they founded Yakutsk and many other settlements.

Of course much of the land between these settlements was thinly inhabited. Northward lay a frigid region where the soil could be cultivated only during a few months in the year. Distances were tremendous. For more than 200 years settlements were distributed only along the river valleys. After the middle of the 1600's, however, they were gradually established farther away from the valleys, spreading both south and north.

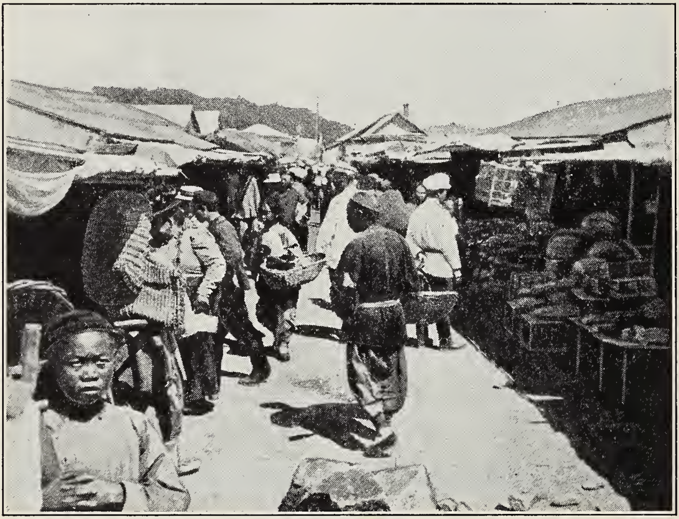

Fig. 123. A market in Vladivostok today. Here Europeans and Asiatics are seen shopping

Pushing up the headwaters of the Yenisei and the Lena, the pioneers found Lake Baikal, in one of the wildest and most beautiful regions in the world. They pushed on eastward till they came to Kamchatka, a peninsula lying at the extreme eastern end of Asia. By 1800 the empire extended from eastern Europe to the Pacific Ocean. Finally, about 1860, the Czars had gained another seaport, Vladivostok. This was not, strictly speaking, a warm-water port, but it could be used for trade.

Thus was completed one of the greatest migrations that any people ever made — 8,000,000 square miles of thin settlement!

THE EMPIRE CAME TO INCLUDE ONE SEVENTH OF THE LAND AREA OF THE EARTH

The story of the rolling out of the Russian Empire from the little region around Moscow is now before us. If you look at the map of figure 118, you will understand what it means. In 1914 the Russian Czar was ruling over a region twice as large as all Europe. The Russian Empire sprawled across Europe and Asia, the greatest single block of territory in the world governed by one ruler.

But in spite of all its great expansion covering 400 years of history *Russia still lacked her one desire, the needed outlet for trade — a warm-water port.*

What ports had she?

On the north, Archangel, on the White Sea, closed most of the year.

On the west, several ports on the Baltic Sea, such as St. Petersburg and Riga. But the Baltic is a cold sea, and, moreover, it is out of the way for trade with southern Europe and Asia and is far from the Mediterranean, which, as we have seen, is the great highway of European trade.

On the east in Asia, Vladivostok, which can be kept open through the winter only by the use of ice-breaking steamers.

On the south, ports on the Black Sea, but without control of the outlet through the Dardanelles past Constantinople to the Mediterranean and the Atlantic. A port on an inland sea with no outlet is of little use. She had also ports on the Caspian Sea, which lies between Europe and Asia, but had no outlet to the water route to the East.

What additions would have profited Russia particularly? A port south of Vladivostok on the Pacific would have been useful. But, most of all, control of the gateway that opened the Black Sea into the Mediterranean would have given her the greatest trade advantages.

Do you see what was the greatest drawback for the Russian Empire? Though it stretched from coast to coast, it lay too far north. With all its 8,000,000 square miles of land, it still needed a warm-water outlet.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

Marshall, H. E. An Island Story. Frederick A. Stokes Company, New York, 1920. Chapter CIV relates how England and France opposed Russia's attempt to seize Constantinople.

Mokrievitch, Vladimir de Bogory. When I was a Boy in Russia. Lothrop, Lee & Shepard Co., Boston, 1916. A true picture of life in one part of Russia.

*Van Bergen, Robert. The Story of Russia. American Book Company, New York, 1905. An excellent account of Russia's history, being devoted largely to the affairs of the ruling classes.

Van Loon, Hendrik W. The Story of Mankind, pp. 301–307. Boni & Liveright, New York, 1921.

Magazine Articles

"'Deaf' Villages Far North," *Asia*, September, 1927, pp. 732–735.

*"Russia's Orphan Races," *National Geographic Magazine*, October, 1918, pp. 245–278.

CHAPTER XII

THE RUSSIAN PEOPLE: MORE FARMERS THAN MANUFACTURERS

"The granary of Europe"

Just before the World War the United States raised nearly 1,000,000,000 bushels of wheat in one year. That was considered a great achievement and was made possible in part by the use of a large number of farming machines.

Russia, however, produced within one year more than 1,000,000,000 bushels of wheat, 1,000,000,000 bushels of rye, and nearly 1,000,000,000 bushels of oats — almost without farming machines. A truly remarkable achievement! It is little wonder that Russia has long been called "the granary of Europe."

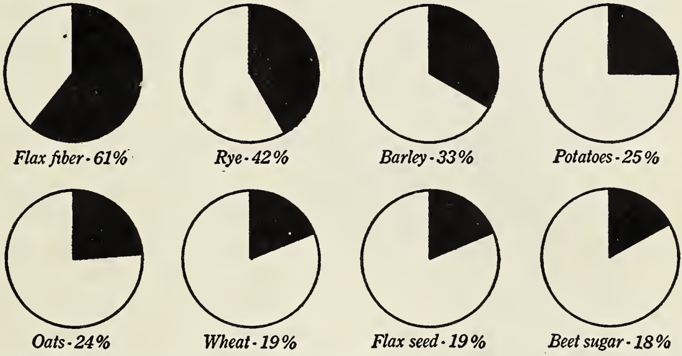

FIG. 124. The darkened areas of the circles indicate Russia's share in the world production of eight important crops

Figure 124 sums up the tremendous agricultural production of Russia in the years immediately before the World War.

Russia had about 10 per cent of the world's population at that time. Notice in figure 124 what proportion of the world's farm products she raised.

How was Russia able to produce these enormous crops?

Look at the maps of Europe and Asia following pages 328 and 424. Notice the tremendous expanse of level land in eastern Europe. Russia has more level land within her boundaries than any other country in the world. With the exception of the Ural Mountains most of this land is less than 1000 feet above sea level. There are few regions in the world like it. Even our great central plains of the United States are not so large.

The Three Sections of European Russia

The level plains of Russia are not equally productive of food crops, however. Some districts are cold and arid and produce meager crops; some are moderately fertile and located in a fairly productive climate; still others are so rich that the whole of Russia could be fed from them. Let us study these sections briefly.

Think of European Russia as divided into sections: (1) the northern section, (2) the central section, (3) the southern section. (See figure 125.)

1. In the northern section crops are meager

From the Arctic Ocean to Moscow the land is not very good for farming. Around Archangel, for example, it is as bleak and icy as Greenland and Labrador. Like the land of the Eskimos, this region is frozen over most of the year. We call these level areas that have no trees tundras. Even in the warmest season, when the low swampy plains are thawed out, only moss and grasses will grow there. Though the ground thaws to the depth of a foot or two, it never gets thoroughly thawed out so that crops can be planted and harvested.

South of Moscow, however, the climate is so warm that great forests thrive. The immense woods of this country, especially in the eastern part near the Ural Mountains, remind us very much of our own great timbered mountains in northwest United States. In European Russia alone the forests cover a territory of almost 405,000,000 acres.

2. In the central plains great crops of rye are produced

Note on the map, figure 125, the great central region — a great blackened strip running through central Russia. Here enormous quantities of rye are raised. Most of the 750,000,000 bushels of rye produced yearly just before the World War came from this region.

3. In the black-earth region huge amounts of wheat are raised

Notice the black spot just north of the Black Sea on the world wheat map of figure 92. This is the region called the Ukraine. Do you see what a tremendous amount of wheat is raised in this district? There was not a region in the world before the war which produced more wheat than this one — neither our own central wheat belt nor the vast wheat plains of Argentina.

Southern Russia was called the savage steppe when the Russian people took it from the Cossacks and the Poles. So fertile are the lands of this region that today it is regarded as one of the richest farming districts in the world. You have already learned that it is called the black-earth region, because the earth is as black as coal when it is wet. The earth here is a rich mold. Slowly through thousands of years plants have decayed and produced a rich vegetable mold, which is thought to be ten to twenty feet deep

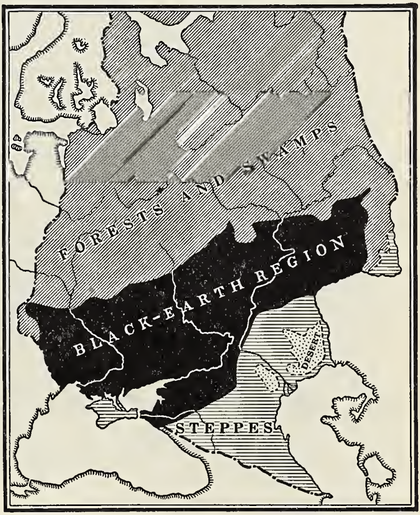

FIG. 125. Kinds of land in European Russia. In the extreme north where it is very cold there is little vegetation. As one travels south and the weather begins to be warmer, great stretches of forest and swamp land are found. Some of the soil is used for farming. It is the black-earth region, however, which contains rich land particularly favorable for the growth of grain. This section has earned for Russia the title "the granary of Europe"

in some places. In this region Russia has enough rainfall so that barley, oats, and other crops grow very quickly and abundantly.

There is an interesting fact about the farming land of Russia that you should remember. Although in size the cultivated land makes up less than one fourth of European Russia, yet its area is *greater than the total area of France, Germany, and Great Britain combined.*

What explains such a difference in the richness of farm products in these three regions of Russia? Several things, but especially temperature and rainfall.

Compare the map of production of the various grain crops with the temperature map in Chapter XXVI. Is there any relation between the low temperature in northern Russia and the sparseness of production of food in that region? Does the warm temperature in the region just north of the Black Sea help to account for the large amount of wheat and other grains produced in this section?

Is there any relation between the usual amount of rainfall in southern Russia and the great production of wheat, rye, barley, and other crops?

Russian farms can feed almost all the people

Although scarcely anything grows in the icy northern plains of Russia, the southern black-earth region produces enough for all. Great quantities of food are raised — not only enough to feed the northerners but to help feed the people of other lands as well. Because of this Russia was sometimes called "the granary of Europe" (see figure 126).

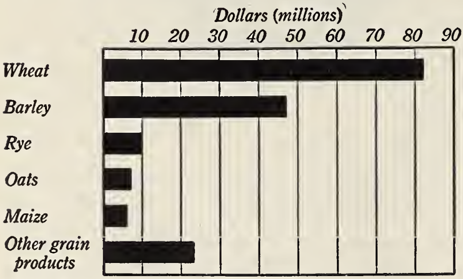

FIG. 126. The value of Russia's grain production for one year. The graph shows Russia's importance as a wheat-growing country particularly

The value of the grain exported in one year was $175,000,000 — largely from the Ukraine. By 1914 Germany and other western European countries were very dependent upon Russia for two food crops — barley and wheat.

These large crops were raised mainly by crude farming methods

The Russian farms were divided into strips much as were the farms of medieval English manors. The village land was divided into three large fields, separated from one another by ditches about a foot wide.

These fields were cut into strips. Every peasant held one or several of these strips in each field. The strips were very narrow, for the land had been divided among the sons of the family for many generations. As time went on, the long strips grew ever slimmer. Sometimes they were so narrow that a farmer had to walk on his neighbor's land in order to plow his own.

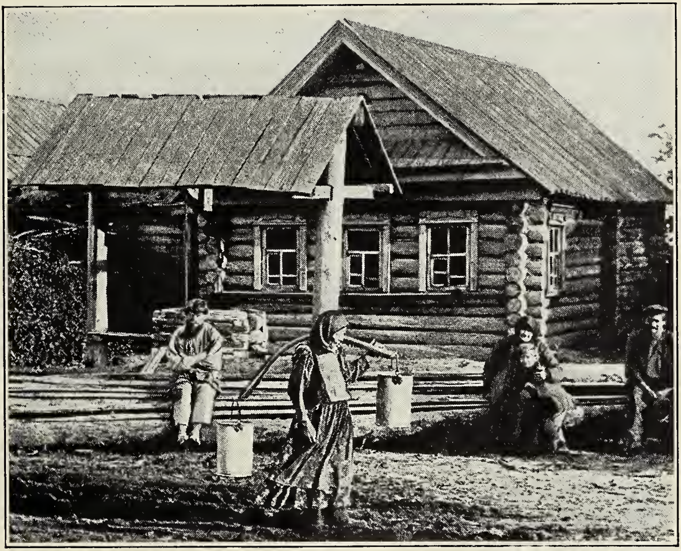

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Fig. 127. Do you see anything in this Russian scene that reminds you of life in an industrial country?

Russian farm implements were little better than those of primitive times. Even today you can travel hundreds of miles over the great wheat farms of Russia without seeing a threshing machine such as those which are so common on American farms in the Middle West. Thousands of Ukrainian peasants plow their rich soil with homemade plows that just scratch the surface of the ground, in much the same way as our pioneer forefathers did in America. They sow and reap by hand, thresh laboriously by beating out the grains of wheat with crude flails, and slowly haul their crops to the villages and towns in carts.

It is difficult to imagine 3,000,000,000 bushels of grain planted, cultivated, harvested, and threshed by hand. How could such enormous crops have been produced? Only under three conditions: first, a vast extent of very fertile soil; second, a good climate for growing grain; and third, a tremendous number of laborers. All these conditions are true of Russia. Not only are the fields of south and central Russia enormous and the climate favorable, but there are also great numbers of peasants to labor by hand. To understand how the people of Russia could produce such large crops let us study briefly the story of the Russian peasants.

Until recently serfs produced the crops of Russia

Russia was an enormous country, and there should have been plenty of land for everybody. But for a thousand years, until 1861, most of the Russian people were serfs, who were little better off than slaves. Although by their muscles and their endless toil they raised great crops, they themselves often went without food.

As early as 1601 there were laws which compelled the peasants to stay on the land which they were then farming. These laws bound the serfs to the soil.

The peasants were really slaves of the rich landowners. Their names were put into books under the names of the people on whose estate they were serving. This made it very hard for them to run away without being caught. Only a desperate man would try it, for if a runaway serf were returned to his master his punishment was very severe.

After 1646 the landlords secured still more power over the lives of their serfs. Other laws were passed, stating how much they could punish them. Still others even permitted them to separate the serfs from their families, to sell them as slaves.

The serfs were considered more as farm machinery than as human beings. As time went on the working and living conditions of the Russian peasants became almost unbelievably bad. They lived in poverty and ignorance and filth. Almost none of them could read or write. Indeed, few stories of wretchedness are so terrible as those of the Russian serfs.

A few masters were interested in the health and happiness of their peasants, but many of them were cruel, desiring only to obtain as much work as possible. The law permitted them to punish disobedience of any kind by whipping, "not exceeding 40 lashes with the birch or 15 blows with the stick." A present-day writer, who lived in Russia recently, tells the following story:

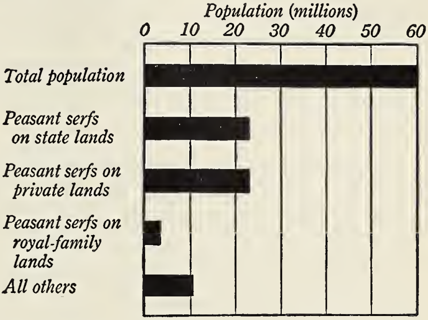

FIG. 128. Russia's population in 1861. Until after this time nearly five sixths of Russia's population were serfs who farmed land which they did not own

> Only a few months ago as I rode through a country district . . . with a peasant of the neighborhood, he pointed out an estate of a former landowner who had been a terror to all his peasants. From a tower still standing in the garden he used to watch the workmen in the fields with glasses, and at the end of the day report laggards to the overseer for punishment. Huskies armed with birch branches waited in the barn, and many a peasant was carried home with a bleeding back, too weakened to walk. My companion told me how his own grandfather had been beaten to death by an overseer of this same landlord. One day he was ill and did not report for work. The boss ordered birches, and himself beat the sick man while four other peasants held him. The next day when the overseer called, he found the grandfather dead. He took a casual look at the body and laconically remarked: "Well, he must have been sick after all."
>
> And that closed the incident. It was unfortunate, no doubt, that his misjudgment had lost a serf to his master. But so was the death of an ox a loss.[1]

---

[1] Karl Borders, *Village Life under the Soviets.* Vanguard Press, Inc., New York, 1927.

Serfs legally freed in 1861; ownership of the land given to village communities

The bar graph of figure 128 shows that in 1861 nearly 50,000,000 out of the 60,000,000 people were serfs.

In 1861, nearly two years before Abraham Lincoln freed the black slaves of the United States, the white serfs of Russia became free men. At the same time the Russian government divided the land among the villages.

Land was taken from the landlords and the clergy and even from the huge estates of the Czar himself. In some regions as much as half of the land was taken from the lords. *But it was not given to the freed serfs. It was given to the "mir" (the village).*

The *mir* in turn had to pay taxes to the government for this land. Village meetings were held at which the land was divided among the people, and where it was also decided how much of the tax must be paid by the various peasants.

Once in twelve years, or sometimes longer, the land was redivided among the peasants. Perhaps some families had grown larger and needed more land, or one family might have died, so that its land had to be redistributed.

Peasants often wanted little land rather than a great deal. Can you think of a possible reason for this?

This story of the meeting which a village once held to redistribute the land to the peasants will show you a little about the way in which the *mir* worked before the World War of 1914.

> Ivan is being asked how many shares of the community land he will take, and replies in a slow contemplative way: "I have two sons, and there is myself, so I'll take three shares, or somewhat less if it is your pleasure."
>
> "Less!" exclaims a middle-aged peasant who . . . takes the leading part in the proceedings. "You talk nonsense. Your two sons are already old enough to help you, and soon they may get married, and so bring you two new female laborers."
>
> "My eldest son," explains Ivan, "always works in Moscow, and the other often leaves me in summer."
>
> "But they both send or bring home money, and when they get married, the wives will remain with you."
>
> "God knows what will be," replied Ivan, passing over in silence the first part of his opponent's remark; "who knows if they will marry?"

"You can easily arrange that."

"That I cannot do. The times are changed now. The young people do as they wish, and when they do get married they all wish to have houses of their own. Three shares will be heavy enough for me!"

"No, no. If they wish to separate from you, they will take some land from you. You must take at least four." . . .

"He is a rich muzhik" [peasant], says a voice in the crowd. "Lay on him five souls" [that is to say, give him five shares of the land and of the burdens].

"Five souls I cannot; I cannot."

"Very well, you shall have four," says the leading spirit to Ivan; and then, turning to the crowd, inquires, "Shall it be so?"

"Four! Four!" murmurs the crowd, and the question is settled.[1]

The story illustrates the strong control that the village community had over the people. The vote of the village even determined how much land a peasant should have.

Heavy taxes made living hard for the peasants

The peasants of the 1860's were little better off than their ancestors had been. They still had to pay such heavy taxes that they had barely enough left for food, and many of them begged for less land so that they should not be expected to pay so large a tax.

Many peasants hired themselves out to the landlords, who still owned some of the land, in order to get a bare living. But wages were so low that they could make little by working on the big estates of the lords. Sometimes the peasants rented land and farmed it themselves, but rents were so high that no profit could be made by farming rented land. No matter how they arranged it, they seemed no better off. The government tax-collectors came to be as hated as the landlords had been formerly. The peasants saw that though they were legally "free," they seemed to be doomed to hardship and toil and debt forever.

Slowly, throughout the huge land, from cities to villages, the spirit of revolt spread. In the 1880's and 1890's the peasants gained courage. They cut down forests to use for fuel and for buildings without asking permission of the officials or nobles. They frequently refused to pay rents and taxes and sometimes burned barns and other buildings of the gentry. They organized a Peasants' Union, which made demands upon the government, one of which was "All the land for those who labor on it."

---

[1] Wallace D. Mackenzie, *Russia*, pp. 133–135. Henry Holt and Company, New York.

Russia is a land of peasant farmers

Thus we have seen that throughout Russia's long history most of the people have worked upon the land. They have always been farmers, not city or town people, and there have been few handicraftsmen. Even today only a small percentage of the total population are tenders of machines. Russia is not like the United States and other industrial countries in that respect.

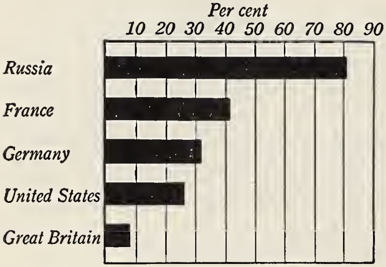

FIG. 129. The approximate percentage of people engaged in agriculture after 1900 in five important countries

Of the five leading powers of the world, Russia is the only one in which most of the people are still engaged in farming. What a contrast is shown by the graph of figure 129! Notice that about one twelfth of the British people are engaged in agriculture, about one fourth of the Americans, and less than half of the French. Out of every 100 Russian people 80 are farmers.

RUSSIAN PEASANTS LIVE IN VILLAGES

In the story of France you read that the peasants live in villages and go out to work on their farms during the day. This is true of European farmers in general. They do not, like American farmers, live on their farms and go to town, perhaps once or twice a week, to do their buying.

Russian farmers are like the other farmers of Europe in this respect. They too live together in villages. Some villages have only a few hundred people; others have as many as 10,000 people; yet each is a real farming community. The inhabitants leave the village each day and walk sometimes miles to reach their fields. At the end of the day's farming they tramp wearily back to their houses. Altogether, more than 80 per cent of the people live in farm villages, of which there are now several hundred thousand.

In Russia every region has its own kind of village life. The Russians have a saying — "Not a village but has ways of its own." Here is a glimpse of village life near Moscow. It is fairly typical of a very large number of communities scattered about over the huge country.

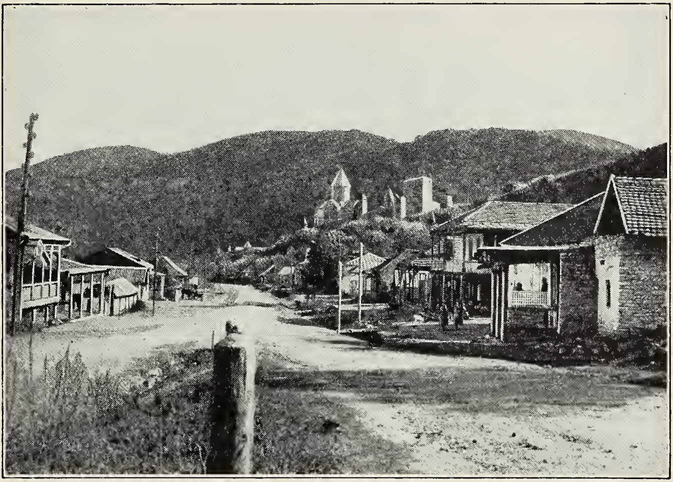

FIG. 130. A street in a village close to the Caucasus Mountains

At noon one August day two travelers set out toward a little Russian village. One was a wanderer returning to his home from America; the other was a native American.

Their way lay across sun-drenched fields of grain, which stretched off to the horizon like great rippling yellow seas. Here and there were small green islands. They were villages. Sixteen of them could be counted from the top of a knoll, each with its great church capped with glistening domes.

When they reached their village an old peasant in a bright-blue smock, who had sat sunning himself, shaded his eyes and stared. Then he cried, "Mikail Petrovich!" and threw his arms around the Russian.

The greeting over, he turned to the American and inquired his name and that of his father. The American replied that his name was Albert and that his father was called David.

"Albert Davidovich!" [Albert, son of David] he cried, "Welcome to the house of Ivan Ivanov. We are poor, but may God give you his richest blessing."

A typical meal was served — first, a bowl of cabbage soup, into which everyone dipped. Later, a bowl of porridge and a third one of raisins. Ivan, the master, presided at the samovar and served tea, cucumbers, and black bread. This was a great feast, for the village was holding a festival.

It was a holiday, and in celebration of it the boys and girls in bright Russian costumes sang and danced on the green before the church. Meanwhile the returned Russian pictured to his countrymen the wonders of his new land, the United States. He told of skyscrapers, great factories, subways, and amusements. The peasants who had lived in one-story houses and who had never seen a shop larger than the blacksmith's listened with interest, but showed little wonder or amazement. One old muzhik [peasant] remarked politely that the Americans did things even more wonderful than the deeds of the wood fairies.

The travelers were a little surprised at the lack of enthusiasm among the peasants. The next day they heard them talking. They were expressing their joy that they could live in their own Russia in their own ways. One of them said, "It's a hard life we live, but God knows it looks harder over there." [1]

WHAT HANDICRAFTS WERE DEVELOPED IN THE RUSSIAN VILLAGES?

In England, just before the Industrial Revolution, handicrafts were flourishing. Many artisans were busy at spinning, weaving, pottery-making, and cobbling. So, too, the artisans of France were gaining world-wide reputations for their glass, pottery, tapestry, and metal work. But in these countries small factories had sprung up.

It was not so in Russia in 1914. There the crafts remained in the simple state of home crafts, and no large number of people became separated from the soil long enough to make a living

[1] Adapted from Albert Rhys Williams's *Through the Russian Revolution*, pp. 41–56. Boni & Liveright, New York, 1921.

by crafts alone. What they needed they made at home as time permitted, just as had been done when the lords and clergy owned serfs in England.

Certain districts did become locally famous for work in the handicrafts. For example, the people around Moscow wove baskets from the branches or shoots of the bushes that grew in the swamps. Later they made wicker furniture. The women in this neighborhood became well known for their beautiful lace. In Yaroslavl the brass samovars were made. No Russian household is without one of these shining vessels that keep water continually hot, ready for the tea. In Nizhni Novgorod knives, forks, and scissors were among the chief manufactures. But such handicrafts supplied only a limited local trade. They helped the peasants *to piece out a meager living*. They occupied the time of a few town artisans. They were not industrial products as we think of them today, nor were they the products of busy guilds of skilled craftsmen.

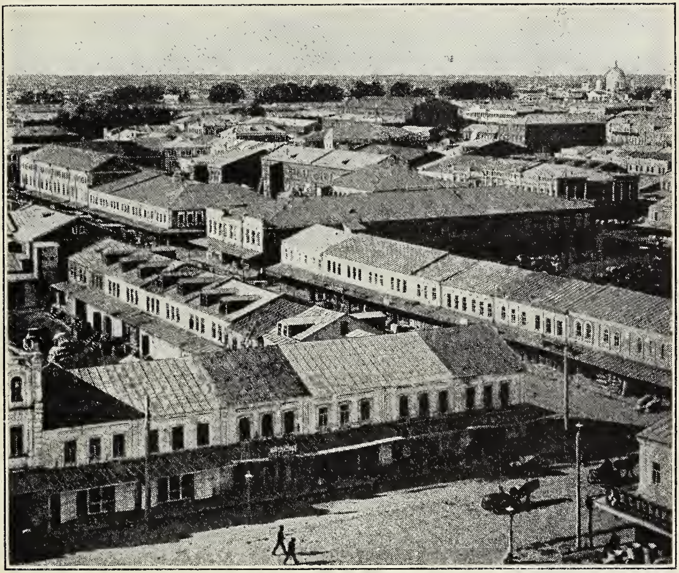

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FIG. 131. The fair buildings at Nizhni Novgorod (now called Gorki)

These simple products of Russia were usually exchanged after the manner of trade in the Middle Ages, that is, by barter. People traded goods for goods — oats for butter, or shoes for cloth. Occasionally peddlers came to the villages, carrying their packs from door to door, displaying their trinkets. As in the Middle Ages, the fairs were the great centers of trading. Peasants went to the trading fairs as farmers go to the annual county fairs in America today, not only for trade but also for enjoyment.

In figure 131 you will see a picture of the buildings used at the most famous fair in Russia — that at Nizhni Novgorod.

RUSSIAN CITIES HAVE GROWN UP, NOT AS INDUSTRIAL CENTERS BUT AS CENTERS OF TRADE

When the census was taken in 1926, there were 31 cities in Russia with over 100,000 inhabitants. The most important of these cities are marked on the map of figure 132.

The words "Russian cities" must not call to your mind, however, a New York, a Chicago, or a London. Most of the Russian cities are very different kinds of places. There is ancient Kiev, the central settlement of that trade route of the Norsemen over 1000 years ago. There is Moscow, the starting-point of the great empire of the Muscovites, which today is a city of over 2,000,000 inhabitants. Then there is Leningrad, the carefully planned city of Peter the Great.

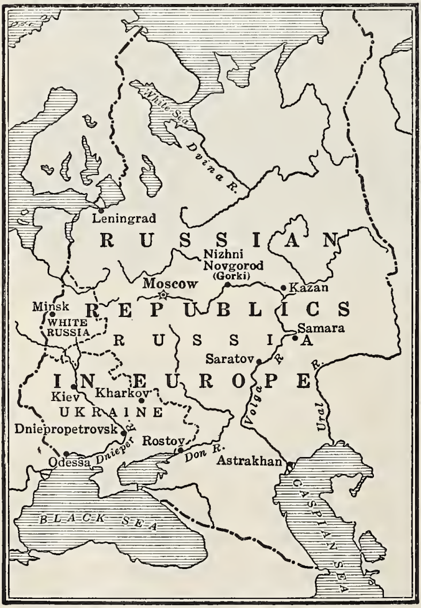
White Sea
Dvina R.
Leningrad
RUSSIAN
Nizhni Novgorod (Gorki)
Moscow
Kazan
Minsk
REPUBLICS
WHITE RUSSIA
Samara
RUSSIA
Saratov
IN EUROPE
Kiev
Kharkov
UKRAINE
Volga R.
Ural R.
Dniepropetrovsk
Rostov
Dnieper R.
Don R.
Odessa
Astrakhan
BLACK SEA
CASPIAN SEA

FIG. 132. Russian republics in Europe

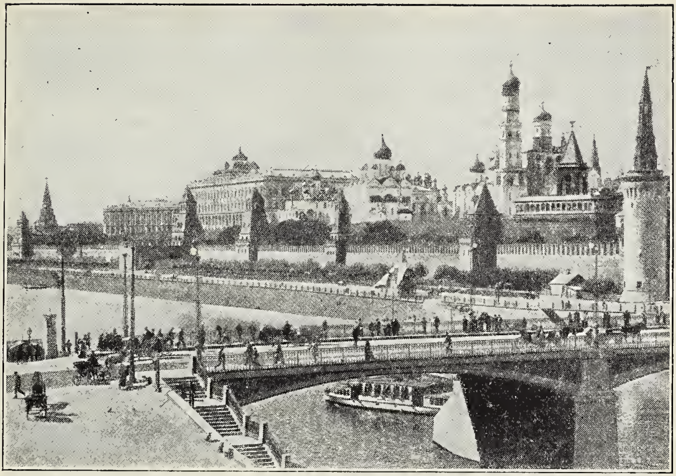

Fig. 133. This is the Kremlin. The original wall surrounded a fortress. Today it contains the most famous buildings in Moscow — museums, churches, and colleges

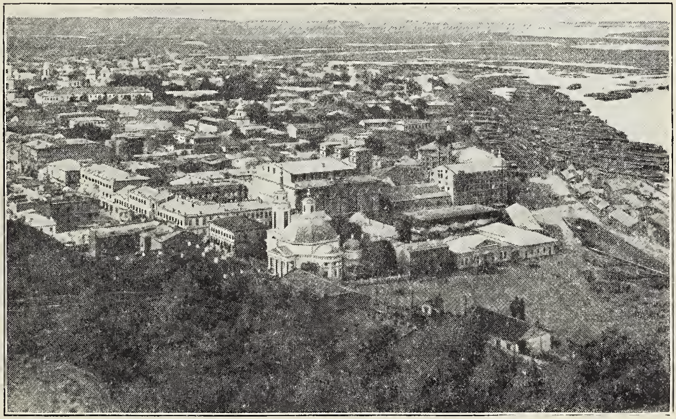

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Fig. 134. The city of Kiev, on the Dnieper River

These ancient cities have grown snowball fashion, much as the Russian Empire did. More and more people have stuck to the outskirts of the towns, which have spread out slowly in all directions, their growth being gradual over long stretches of time.

What other cities are on the map?

Find the port of Odessa on the Black Sea. It has a population of more than 400,000. At the mouth of the Don River on the Sea of Azov there is Rostov, with over 300,000 people. On the Caspian Sea, at the mouth of the Volga River, there is the city of Astrakhan.

There is one thing you can notice very clearly on the map. Almost all these cities are located on water routes. Kiev, on the famous old Baltic-to-Constantinople water road, is only one of them. Trace the course of the Volga. Note the cities along its banks: Astrakhan at its mouth; then Saratov, Samara, and Kazan; and up in the headwaters of one of its tributaries lies the city of Moscow. Five of the larger cities are on one great river.

Note the cities on the seas: Leningrad on the Baltic, Astrakhan on the Caspian Sea, and Odessa on the Black Sea. Evidently, in Russia as in other countries, cities grew up at places convenient for transportation and exchange of goods. These cities show that trade is very important even in a country where both agriculture and crafts are still primitive.

TRANSPORTATION IN RUSSIA

1. Waterways are today the most used means of transportation in Russia

We have seen how trading centers in Russia grew up along the rivers and how pioneers followed the rivers through Siberia. The rivers have always played an important part in the life of Russia, and since early Russian history goods have been constantly carried up and down on them.

Of these rivers the Volga is the greatest.

Steamers ply along this river. They stop at many small stations on either bank, where crowds of venders sell almost every imaginable food —hot pies, fried fish, watermelons, apples, cucumbers, and red currants. While the steamer stops at these villages, the holds are being unloaded and loaded with goods. Hordes of men in red and blue shirts, wearing a kind of shelf strapped to their backs, carry enormous loads as they scurry from the holds of the steamers to the wooden quays and back again.

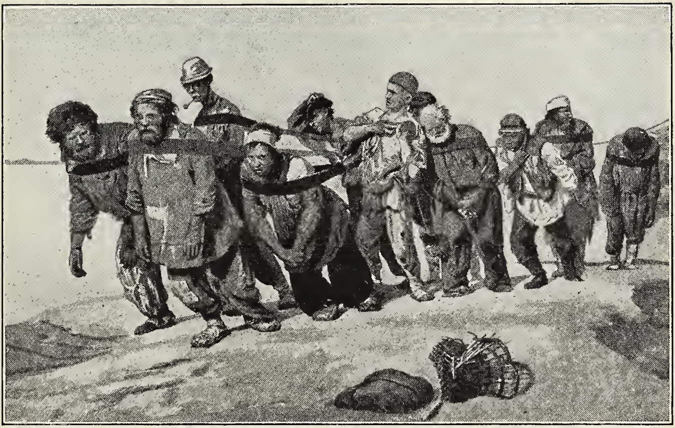

FIG. 135. Volga boatmen. (From a painting by I. Riepin)

However, many of the goods are still carried on the Russian rivers by great barges, sometimes pulled by men who walk along the banks. A famous song of the Volga boatmen runs thus:

> With shoulder, back, and breast astrain,
> And bathed in sweat that falls like rain,
> Through midday heat with gasping song
> He drags the heavy barge along.

2. Land transportation is far less developed than it is in Great Britain, France, Germany, and the United States

In the winter the waterways in the interior of Russia cannot be used for transportation because they are frozen over. Then the people have only the land highways on which to depend for transporting their goods.

The long roads across the Russian plains are not the rolled macadam roads common in our country and in England, France, and Germany. They are mere rough wagon ruts across the plains and through the forests, dusty in dry weather and deep with mud in rainy times. In the spring and in the fall the trails across the steppes are practically impassable.

> The stranger must always have a guide when making a journey to a village whose church domes are not in sight, and even old residents of a community are often lost in the maze of tracks when they wander too far afield. In winter the trails are marked by sunflower stalks or bushes as guides to the wayfarer when snow obliterates the sled tracks. But the memory of one dramatic night spent on the steppe in a blizzard, and another lost road in the Bashkir country with a friendly German villager to harbor us persuades me that even these aids are not unfailingly effective.
>
> Telephones in the congested village are not nearly so important as they are to our isolated farmers, and, as yet, even few of the villages are connected with each other by telephone.[1]

What a contrast to the United States, where over a third of the farm homes have telephones!

3. Trunk-line railways connect far-distant points of Russia

There are a few railway trunk lines in Russia, which connect the largest cities. Notice how the cities on the maps of figures 136 and 148 are joined by railways. There is a great line from Warsaw (Warsaw was a part of Russia before the World War) to Leningrad. There is one which connects Leningrad with Moscow. These two cities, indeed, are important railway terminals. Note how lines radiate in all directions from Leningrad and Moscow.

Note the single railway trailing all the way across Asia to Vladivostok and the Pacific. This is called the Trans-Siberian Railway. It is the only great railway line in Asiatic Russia and is *the connecting land link between Europe and the Far East.* At one end lie Moscow, Warsaw, Berlin, and other cities of the thickly settled European countries; at the other end lie Vladivostok and the neighboring regions of Japan and China. On the way the railway passes through miles of unpeopled forest and bleak tundra. It also passes through a number of the larger towns which have

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[1] Karl Borders, *Village Life under the Soviets*, pp. 31–32. Vanguard Press, Inc., New York, 1927.

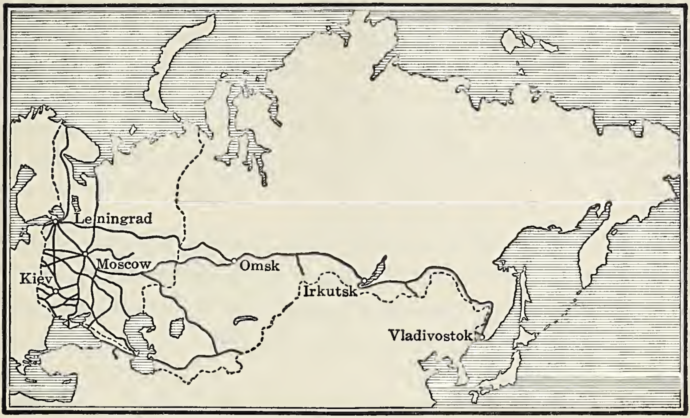

FIG. 136. Chief railways of European and Asiatic Russia

been three centuries in the building. Omsk and Irkutsk are important landmarks on this single great Asiatic trunk line, which from Vladivostok to Moscow is about 5900 miles long — almost twice as far as the distance from New York to San Francisco.

FIG. 137. When the train stops at a station in Asiatic Russia

The Trans-Siberian Railway has done two important things for Russia. First, it bound China, Japan, and other regions of the East more closely to Russia, for after it was built trade had an outlet in the Far East. Second, the railway made it easier to settle Siberia. Settlers had pushed into Siberia long before there was a railway at all in Russia; but to make farming or mining or manufacturing in Siberia profitable, a good means of transportation was absolutely necessary.

Compare the railroad map of Russia with one of the United States. The maps of both countries show important trunk lines radiating from certain large cities. In this respect the two railroad systems are similar. But there is a striking difference. In the United States the railroad map, in addition to these main trunk lines, shows a vast web of small side lines, which join the main lines and pass through the smaller villages and towns, connecting them with the great system.

This web of small connecting cross lines is lacking in Russia, where enormous stretches of land are completely untouched by railroads. In many very large regions slow rivers and miserable roads furnish the only means of transportation.

To what Extent did Russia become an Industrial Nation before the World War of 1914?

We have shown that before 1914 over four fifths of the Russian people were farmers. What were the others doing? They were living in towns and cities — some of them running stores and offices, others working for the government. Some were doctors, lawyers, engineers, or teachers. Were any large number of them coal-miners, iron and steel workers, carpenters, machinists, etc.?

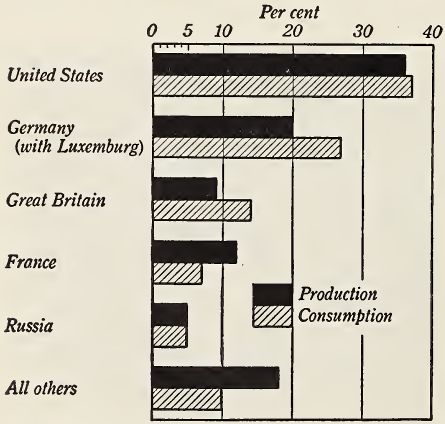

Fig. 138. The production and consumption of iron ore in the five largest iron-producing and iron-consuming countries in the world (1913)

Not a very large proportion. Note the bar graphs of figures 138 and 139. Until 1913 Russia was not affected much by the 150 years of the Industrial Revolution. In 1913, the year before the World War began, Russia produced 2 per cent of the world's coal and

6 per cent of the world's pig iron. It was the fifth most important iron-producing country and the sixth most important coal-producing country in the world.

At the same time the United States was producing nearly half the world's coal and iron. These statements merely confirm what we said before, namely, that Russia is really a farming country.

CAN RUSSIA BECOME AN INDUSTRIAL COUNTRY? RUSSIA HAS ENOUGH COAL AND IRON TO BUILD UP MANUFACTURING

On the map of figure 140 note where Russia's coal and iron mines are located. The richest region is the Donetz Basin, not far from the Sea of Azov and the Black Sea. A small amount is also mined near Moscow, in the region around Tula, but the Donetz coal deposit is by far the best. Engineers have reported that in this region there are 40 veins of coal which can be worked. Russia has plenty of coal, and it is so located that it can be transported by water easily and cheaply.

The iron ore of Russia, which is located near the coal mines, is also of a very high quality. If we can judge from the way in which the possession of iron and coal has encouraged other countries to turn to machine manufacturing, then we can believe that some day Russian iron and steel industries may become very large. However, in 1913 Russia produced only 6 per cent of the world's pig iron. What Russia has done since then toward industrialization will be seen in Chapter XVI.

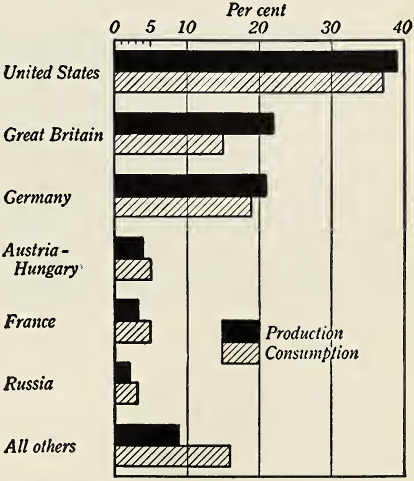

FIG. 139. The production and consumption of coal in the six largest coal-producing and coal-consuming countries in the world (1913)

Has Russia other minerals needed for manufacturing?

The circle graphs of figure 141 show something very important about certain other minerals besides coal and iron. Russia has great deposits of petroleum. During the last few years Great Britain, the United States, and other industrial countries have tried to secure control of the rich Russian oil deposits, the most important of which are located near Baku on the Caspian Sea. It is reported that the oil fields of Baku alone have a greater reserve than all the oil fields in the United States.

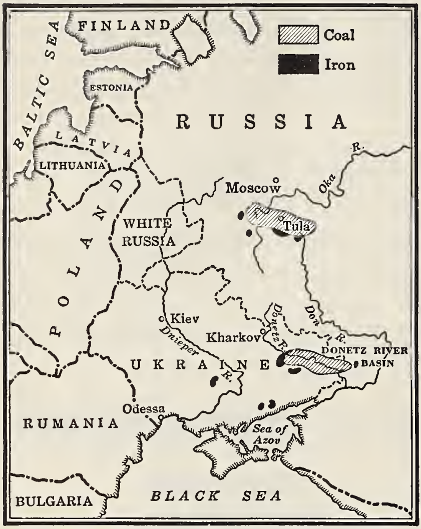
Coal
Iron
FINLAND
BALTIC SEA
ESTONIA
LATVIA
LITHUANIA
RUSSIA
R.
Oka
Moscow
POLAND
WHITE RUSSIA
Tula
Don R.
Donetz R.
Kiev
Dnieper R.
Kharkov
UKRAINE
DONETZ RIVER BASIN
Odessa
RUMANIA
Sea of Azov
BULGARIA
BLACK SEA

FIG. 140. The coal and iron deposits of European Russia. In the region about Tula and in the Donetz Basin coal and iron are found close together

Oil pipe lines are now being laid in Russia. One line, about 497 miles long, joins Baku with Batum, the chief port on the Black Sea, whence the oil is shipped by steamers all over the world.

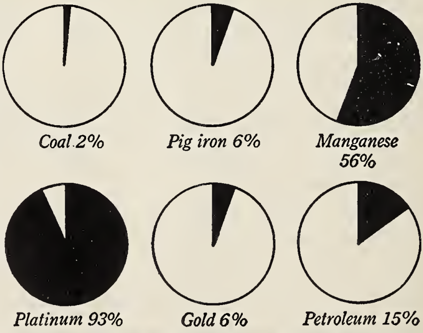

FIG. 141. These graphs show Russia's share of the world's production of important minerals in 1913

Russia also has minerals needed to make steel. You will remember that steel is an alloy and contains, besides iron, small amounts of other metals — for example, manganese. Certain fine grades of steel cannot be made from iron ore without manganese. In 1913 the Caucasus region in Russia produced *more than half of the world's supply of manganese.* Thus the industrial countries of the world depend on Russia for the successful manufacture of much of their steel.

On the circle graphs notice that in the production of one mineral — platinum — Russia is really supreme. Platinum is perhaps the most valuable metal in widespread use today, being worth several times as much as gold. It is also absolutely essential to certain manufacturing processes. In 1913 as much as 93 per cent of all the platinum used in the world came from the Ural Mountains, where it is found in the loose gravel of rivers and is easily washed out.

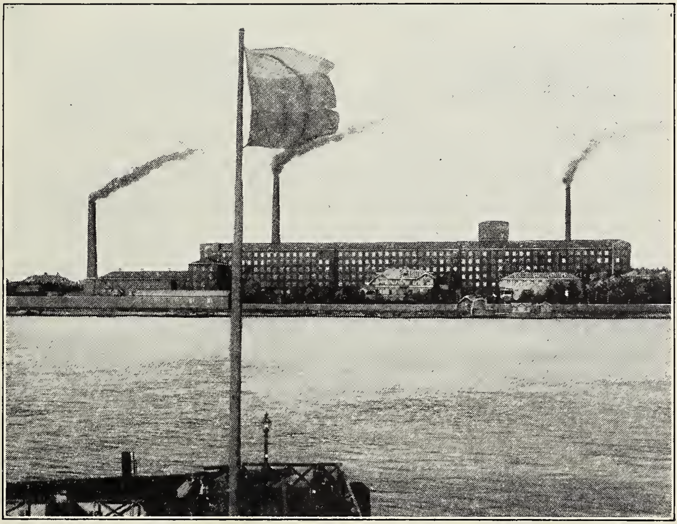

Fig. 142. This is one of the few very large factories of Russia which were in use before 1914

Did Russia manufacture Goods before the World War?

There were some industrial regions and factories in Russia. There were factories for the production of cotton and linen goods, soap, and paper, shipbuilding plants in St. Petersburg (or Leningrad, as it is now called) which had been started by Czar Peter, and even a few large modern industrial developments in parts of the country to which Germans had brought the methods of their homeland. These had grown up chiefly around St. Petersburg and Moscow, in the Ukraine, and in the Ural Mountains region.

There were also a few great industrial plants such as one would see in the United States. The immense Boguslavsky works in the Ural Mountains are an example. Here thousands of men were employed in mines, smelting furnaces, and rolling mills, working at processes necessary to turn raw material into finished products.

Except for these few factories and industrial districts Russia has never been much of a manufacturing country.

The Russian Way of Life

This, then, is a brief picture of the Russian civilization in 1914 — a civilization of millions of people, part of whom were European and part of whom were Asiatic. This, in a way, is the story of the people of all eastern Europe — Finland, Poland, Austria, Hungary, and Rumania and other Balkan countries.

We have seen that theirs is a farming, not an industrial, civilization. Most of the people are peasants and craftsmen, not skilled tenders of machines; they reside in countless villages, not in modern cities; and they get a living laboriously out of the soil, not through the manufacturing and exchange of machine-made goods.

They live much to themselves and travel little. Transportation is slow and difficult, and communication with distant places is almost impossible. Their hours of labor are long, and their reward seems to us in the western world very small indeed.

Nevertheless, these peasant peoples of eastern Europe love their own civilization and prefer it to any other. When they hear about our "modern" industrial ways of living in crowded cities and towns, of working in factories, of riding on trains, etc., they express their joy that they can live in their own Russia in their own way. Their holidays, their recreations, their religion, and their customs mean just as much to them as ours do to us.

Perhaps we can sum it all up by saying that there are different kinds of civilizations on the earth. One people prefers one way of life; another people chooses a different one. But the important thing is that in each country *the people themselves* shall be free *to choose their own way of life.* In the past 50 years the Russian people obtained more and more freedom to determine how they shall live.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*ALLEN, NELLIE B. Asia. Ginn and Company, Boston, 1929. An excellent reference. Chapter XVIII (Across Siberia on the Trans-Siberian Railroad).

*ALLEN, NELLIE B. Europe. Ginn and Company, Boston, 1928. Chapter VIII (A Trip through the Land of the Russians) is a good description of modes of living.

CARPENTER, FRANK G. Asia, pp. 93–101, 297–304. American Book Company, New York, 1897.

CARPENTER, FRANK G. Europe, pp. 327–383. American Book Company, New York, 1924.

CHAMBERLAIN, J. F., and CHAMBERLAIN, A. H. Europe, pp. 138–154. The Macmillan Company, New York, 1916.

*CLARK, VINNIE B. Europe, pp. 392–422. Silver, Burdett and Company, New York, 1925. A fine reference.

FELL, E. NELSON. Russian and Nomad. Duffield & Company, New York, 1916. Thrilling tale, portraying the hardships of life in the Kirghiz Steppes of Asiatic Russia.

*HUNTINGTON, ELLSWORTH. Asia. Rand McNally & Company, Chicago, 1912. A fine reference. See Chapter XII (Transcaspia and Russian Turkestan) and Chapter XIII (Siberia: the Most American Country in Asia).

*WALTER, L. EDNA, HAENEN, F. DE, and others. Russia (Peeps at Many Lands Series). The Macmillan Company, New York, 1917. A delightful book, portraying modes of living in this vast country.

*WHITBECK, RAY HUGHES. Industrial Geography. American Book Company, New York, 1924. Chapter XXVI (Russia in Europe and in Asia).

WILLIAMS, ARCHIBALD. The Romance of Modern Engineering. J. B. Lippincott Company, Philadelphia, 1921. Chapter VII presents a dramatic report of the building of the Trans-Siberian Railway.

Magazine Articles

*"Glimpses of Siberia, the Russian 'Wild East,'" *National Geographic Magazine*, December, 1920, pp. 513–536.

"Russia as 'A Land of Opportunity,'" *Literary Digest*, May 13, 1922, pp. 17–19.

*"Russia of the Hour," *National Geographic Magazine*, November, 1926, pp. 519–598.

"Russia's Democrats," *National Geographic Magazine*, March, 1917, pp. 210–240.

"The Far Eastern Republic," *National Geographic Magazine*, June, 1922, pp. 565–592.

"The Land of Lambskins," *National Geographic Magazine*, July, 1919, pp. 77–88. An interesting article on Bokhara.

*"The Ukraine, Past and Present," *National Geographic Magazine*, August, 1918, pp. 114–128.

"Western Siberia and the Altai Mountains," *National Geographic Magazine*, May, 1921, pp. 469–507.

"With an Exile in Arctic Siberia," *National Geographic Magazine*, December, 1924, pp. 695–718.

UNIT VII

HOW THE GEOGRAPHY OF EUROPE MADE THAT CONTINENT THE WORLD'S GREATEST INDUSTRIAL AND COMMERCIAL REGION

CHAPTER XIII

EUROPE: THE GREATEST INDUSTRIAL AND COMMERCIAL REGION OF THE WORLD

We need to summarize the "geography" of Europe

In the preceding chapters we have studied four of the leading countries of the world — Great Britain, France, Germany, and Russia. The first three were studied as the leading manufacturing countries. Their history taught us how Europeans invented machines and mechanical power and, by means of these, transformed ways of living in many parts of the world. The fourth country, Russia, illustrated the history and ways of living of the agricultural countries of Europe.

These three industrial countries and European Russia comprise over half the area of Europe. In addition, they have secured control over more than half the land area of the earth and nearly half the people.

Many of the smaller European countries also have begun to manufacture with machines and engines. Most of them trade with other countries and are adopting modern ways of living. Some of them — for example, the Netherlands, Belgium, and Italy — have colonies in other parts of the world.

We have learned that Europe mines a vast share of the world's coal and iron ore, and that it makes much of the world's steel and manufactured goods. We have seen that it grows a great deal of the world's food — more than 80 per cent of the world's potatoes, more than a half of the world's wheat, over 90 per cent of the rye of the world, 24 per cent of the cattle, nearly 90 per cent of the beet sugar, and more than 50 per cent of the oats and barley.

Many illustrations have been given in this book of Europe's great power as farmer, as miner, as manufacturer, and as world trader. They prove beyond doubt that *Europe has recently become the greatest industrial and commercial region in the entire world.*

What has made possible this astonishing development? Our next problem is to answer that question. To answer it we must study the "geography" of Europe as a whole. We must study the location of the continent on the earth, its size, and its people. We must sum up our knowledge of the climate, the soil, and the minerals, and we must inquire concerning the people's use of scientific knowledge.

In the preceding chapters you have studied these factors in so far as they applied to the separate countries. Now we shall sum them up for Europe as a whole.

FOUR REASONS WHY EUROPE HAS BECOME THE MANUFACTURING AND TRADING CENTER OF THE WORLD

The first reason: location in a stimulating and productive climate

No reason is of greater importance than this one: Europe, like the United States, lies in the stimulating and productive climate of the north temperate zone.

From your study of *An Introduction to American Civilization* you know that three things are true of most parts of the temperate zones:

1. Rain falls in moderate amounts in all seasons of the year, and the winds bring changeable weather.
2. The seasons are strongly pronounced, winter being clearly different from spring, and autumn and summer from each of the others.
3. The temperature changes every few days. Some days in winter are cool; others very cold. Some summer days are warm; others very hot.[1]

These conditions are true of Europe as they are of the United States. They give the first important reason for Europe's relatively high standard of living.

Recall the story of the contrast between life in stimulating climates, as in Ontario, Canada, and life in tropical climates, as in the Bahama Islands. Throughout the entire temperate region people are stimulated by the change from warm days to cool days, and by the occasional short stretches of very cold and very hot weather. It is the people who live in these cool temperate zones, especially the Europeans and the Americans, who have succeeded in obtaining the most comfortable living. And it is some of these people — the British, the French, the Germans, the Russians, and others — who have remained independent peoples.

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[1] See Chapter III of *An Introduction to American Civilization* for a more thorough study of this matter.

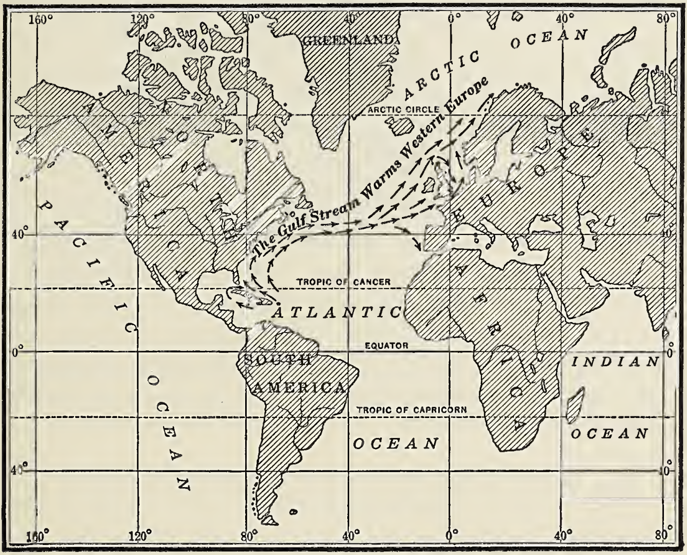

GREENLAND
ARCTIC OCEAN
ARCTIC CIRCLE
The Gulf Stream Warms Western Europe
NORTH AMERICA
EUROPE
PACIFIC OCEAN
TROPIC OF CANCER
ATLANTIC OCEAN
EQUATOR
SOUTH AMERICA
AFRICA
TROPIC OF CAPRICORN
INDIAN OCEAN
160°
120°
80°
40°
0°
40°
80°
40°
0°
40°

FIG. 143. The Gulf Stream, which warms the southern coast of the United States, crosses the Atlantic Ocean and also warms the northwestern countries of Europe. These European countries would be as cold as northern Canada were it not for the Gulf Stream

Look carefully at the map of figure 143. You will see that Europe lies farther north than the United States. While most of the United States lies between the north latitudes of 30° and about 46°, most of industrial Europe lies between 40° and 60°.

Notice that Great Britain, Germany, and northern France, for example, lie about as far north on the earth's surface as the icy regions of Labrador and northern Canada, and also as far north as the cold region of Siberia.

Yet the climate of Europe compares favorably with that of the United States. Throughout north-central United States in July the temperature will average between 72 degrees and 80 degrees. Most of Europe in July has a temperature between 65 degrees and 80 degrees, with an average temperature of about 70 degrees.

For example, notice that Moscow is located in north latitude 56°. This places it in the same latitude as central Labrador in North America. Labrador is a bleak ice-bound region with few people and little productive agriculture, yet the temperature of Moscow, which is the center of a fairly good farming region, is about 10 degrees higher than that of Labrador in July.

How then can we explain why Europe, lying so much farther north than the United States, has a climate so much like the United States? The warm Gulf Stream helps to explain it. The Gulf Stream is a warm ocean current of surface water that flows northeastward from Florida across the Atlantic Ocean. Part of this warm stream passes along the western coast of Europe. The westerly winds in passing over the Gulf Stream become warmed and in turn warm the coast and even the interior of Europe. If it were not for the Gulf Stream and the westerly winds playing over the Atlantic, northwestern Europe would be as icy as northern Canada or northern Siberia.

The absence of high mountains on the coast also a cause of the favorable climate

Look again at the map following page 328. Note that north of 50° there are no high mountains in Europe. The Urals, which are the boundary line between Europe and Asia, are the first of real importance. Thus the warm wet westerly winds from the Atlantic are permitted to sweep thousands of miles across north-central Europe at all seasons of the year. Europe as a whole, therefore, is actually a warmer place in which to live than much of North America, in spite of its being located farther north.

The absence of mountains in north-central Europe has another important effect — rainfall is much more evenly distributed than it is in the United States.

Thus the winds from the Gulf Stream affect Europe in two ways: they make her climate warm, and they carry rainfall to her broad level fields — even as far as the Ural Mountains, about 2500 miles from the Atlantic Ocean.

The second reason: Europe has vast natural resources

1. How large is Europe?

Europe has a great acreage of fertile land. Is that one reason why Europe became the world's greatest manufacturing and trading region?

Things seem large or small only when they are compared with other things. If Europe is compared with the United States, it will perhaps seem large; if it is compared with a large continent such as Asia, it will seem small (see the two maps of figure 144).

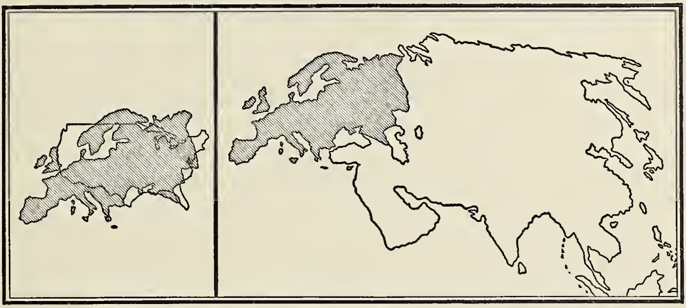


FIG. 144. These maps help you to understand the size of Europe. Europe is somewhat larger than the United States, but it is one of the smallest continents

Is the United States large? Then Europe is large, since it slightly exceeds the United States in size.

Is Asia large? Then Europe is small, for it is only about one fourth as large as Asia, only about one third as large as Africa, and only about half as large as North America or South America. (See Appendix, Table II.)

Many people do not like to regard Europe as a *continent*. They maintain that it really is a peninsula projecting out from the *continent of Eurasia* (that is, Europe and Asia combined). And so it really is (see the map of Eurasia in figure 144), but it is more convenient to regard it as a separate continent; for, as you will learn, most of the peoples of Asia have ways of living quite unlike those of Europeans.

2. Europe's large amount of level fertile land

Study the map following page 328. Note the vast lowlands stretching from France and Belgium on the west to the Ural Mountains on the east. Note the following facts about these lowlands:

1. The absence of high mountains in central and southeastern Europe.
2. The large amount of low, fairly level land and the small amount of high plateau land.
3. The absence of dry, sandy deserts.
4. The large number of broad, fertile river valleys.

These lowlands form the greatest single food-raising plain in the world — about 2,660,000 square miles in area. In your study of American civilization you learned of our own great central plain — the vast garden that produces nearly 65 per cent of the world's corn and nearly one fifth of the world's wheat.

But the European plain is an even richer garden spot. Merely a glance at the food maps of figures 91, 92, 93, and 94, and the table which follows is enough to convince one of Europe's supremacy as a producer of food.

PER CENT OF WORLD'S AGRICULTURAL PRODUCTS PRODUCED BY EUROPE AND THE UNITED STATES

Products	Europe	United States
Wheat	46	19
Potatoes	62	7
Rye	92	2
Swine	29	24
Sheep	34	6
Beet sugar	88	11
Corn	12	65

Of the basic food materials used in the western world, the United States exceeds Europe only in the production of corn. Europe is not a corn-producing nor a corn-using region. The United States raises 65 per cent of the world's corn.

Summing up the production of food: Europe leads the world in the amount of food products raised per square mile.

3. The land of Europe is rich in coal and iron

To become the world's greatest manufacturer, Europe also needed fuel and raw materials. You have learned that she has them both in large quantities. Look ahead to figures 149 and 151 in Chapter XIV. Two coal and iron regions are shown in black on these maps. They form the great industrial region of Europe.

This region and the corresponding region of the United States produce more than 85 per cent of all the coal of the world. And of these two Europe produces and uses more coal than does the United States.

Consider coal: little Britain alone produces more coal than any other nation of the world except the United States. This is an astonishing fact because Great Britain is insignificant in size compared to other important coal-producing countries. Though only about one thirty-second as large as the United States, yet England is the world's coal-miner.

Consider iron: France and Germany produce nearly one quarter of the world's iron.

4. Among other raw materials Europe lacks oil, copper, nickel, tin, and other minerals

Europe has coal and also the water to make hydroelectric power, but she lacks oil. In a recent year European countries imported 62,000,000 barrels of oil from other countries.

Europe also lacks many of the materials necessary to an industrial country, for example, ferromanganese, tin, vanadium, nickel, copper, tungsten, silk, rubber, and shellac. These must be imported from Asia, Africa, Central America, and South America.

Summing up, we see that Europe has vast resources: (1) a large amount of level fertile land, particularly favorable to farming, and (2) rich stores of coal and iron, the two essentials to manufacturing. Like the United States, however, she lacks many other minerals that she needs. For these Europe is dependent on regions lying outside her own boundaries.

The third reason: Europe's large population, ready to work

We learned that Europe was small in land area compared with the other continents.

But if one considers its population, Europe becomes very important (see Table II in the Appendix). Although its area is only a little over one fourth that of Asia, it has nearly half as many people. It is only about one half as large as North America but contains nearly three times as many people. It is a little less than one half as large as South America but contains nearly six times as many people.

Because Europe has developed its natural resources and has so many people it has been able to maintain its supremacy in manufacturing and trade. But one other important fact should be remembered—its people not only are *numerous*, they also work very hard.

Nearly everybody works. In busy times women and children work with the men in the fields and even in the factories. To produce food, clothing, and shelter for 476,000,000 people in an area not much larger than the United States it is necessary that everybody work, and work hard. Europeans have learned that they can continue to live only by using all the daylight hours and by taking care not to waste their resources — their fields, their fertilizers, their coal and other minerals, and their animals.

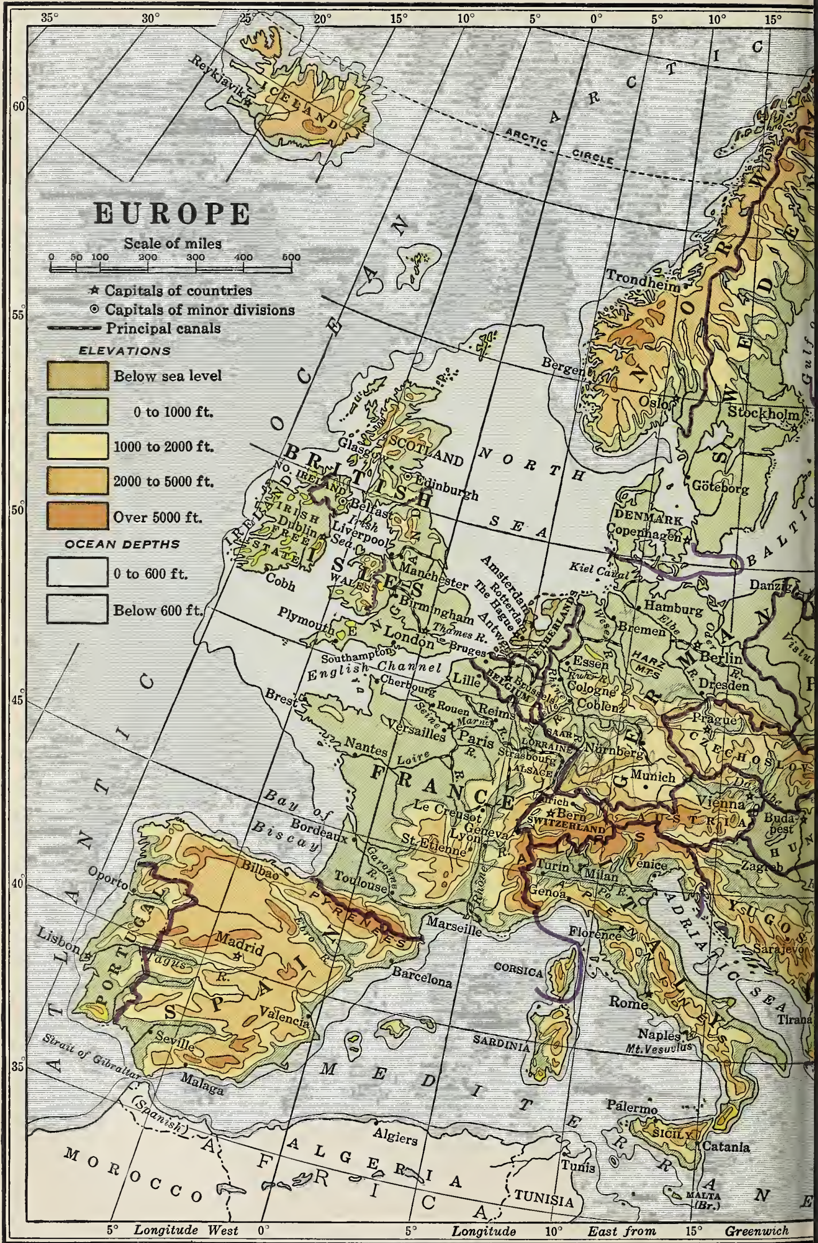
Perhaps it might be better to say that Europe has many people who must work hard. The climate forces them to do so. In the fertile river valleys of India and southern China the climate is fairly warm the year round, and crops can be raised one after another throughout the year. In northern France, in Germany, in Russia, in England, and in other parts of Europe, however, the winters are cold. It is necessary to be prepared for them ahead of time.

With this need upon them to prepare for the cold seasons which come every year, the people of Europe are forced to devise new and faster ways of preparing food and clothes and houses. But more than that, they are forced to plan their work and to look ahead, for each changing season brings with it fresh worries and different problems.

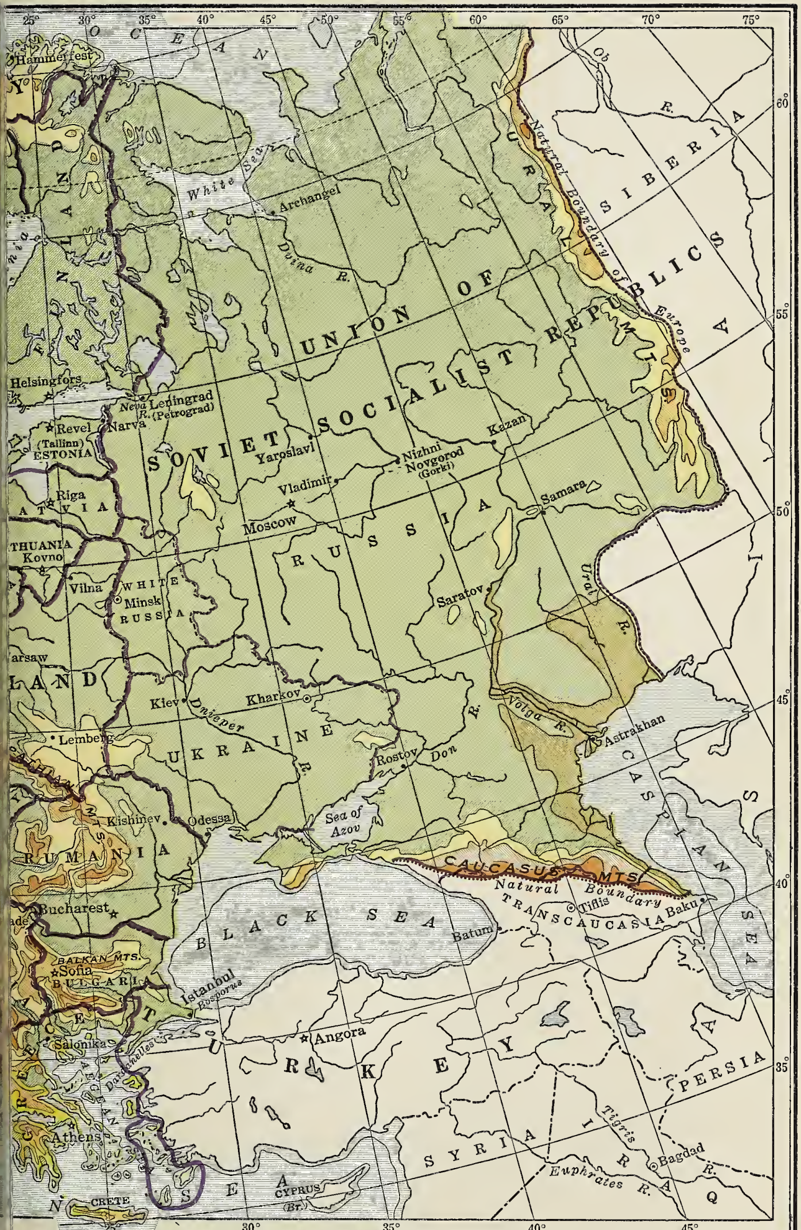
So the Europeans are forced not only to work hard, but to be clever in devising ways of getting ahead of ever-changing nature.

The fourth reason: Europeans learned how to use science in the invention of machines and engines

As you know, the Industrial Revolution began in England. The invention of the steam engine and of the textile machines is regarded as the first definite beginning. American inventors also contributed many new ideas, Frenchmen added many inventions, and the Germans added more, particularly those dealing with chemical and electrical processes. In the nineteenth century


EUROPE
Scale of miles
0 50 100 200 300 400 500
★ Capitals of countries
⊙ Capitals of minor divisions
Principal canals
ELEVATIONS
Below sea level
0 to 1000 ft.
1000 to 2000 ft.
2000 to 5000 ft.
Over 5000 ft.
OCEAN DEPTHS
0 to 600 ft.
Below 600 ft.
35° 30° 25° 20° 15° 10° 5° 0° 5° 10° 15°
60 55 50 45 40 35
ARCTIC CIRCLE
ARCTIC
ATLANTIC OCEAN
NORTH SEA
ICELAND
Reykjavik
BRITISH ISLES
SCOTLAND
Glasgow
Edinburgh
NO. IRELAND
Belfast
IRISH FREE STATE
IRELAND
Dublin
Irish Sea
Liverpool
Manchester
ENGLAND
WALES
Cobh
Birmingham
Plymouth
London
Thames R.
Southampton
English Channel
NORWAY
SWEDEN
Trondheim
Bergen
Oslo
Stockholm
Göteborg
Gulf of
DENMARK
Copenhagen
BALTIC
Kiel Canal
Danzig
Amsterdam
Rotterdam
The Hague
Antwerp
Bruges
NETHERLANDS
BELGIUM
Brussels
Lille
GERMANY
Hamburg
Bremen
Elbe
Oder R.
Weser R.
Berlin
HARZ MTS
Essen
Ruhr R.
Cologne
Coblenz
Rhine R.
Moselle R.
Dresden
Vistula
Prague
CZECHOSLOVAKIA
SAAR
LORRAINE
ALSACE
Strasbourg
Nürnberg
Munich
Danube
Vienna
AUSTRIA
Budapest
HUNGARY
Brest
Cherbourg
Rouen
Seine R.
Marne R.
Reims
Versailles
Paris
Nantes
Loire R.
FRANCE
Bay of Biscay
Bordeaux
Garonne R.
Le Creusot
St. Etienne
Lyon
Geneva
Rhone R.
Toulouse
Marseille
PYRENEES
Zurich
Bern
SWITZERLAND
ALPS
Turin
Milan
Po R.
Venice
Genoa
Zagreb
APENNINES
ITALY
ADRIATIC SEA
YUGOSLAVIA
Sarajevo
Tirana
Florence
Rome
Naples
Mt. Vesuvius
CORSICA
SARDINIA
Palermo
SICILY
Catania
MALTA (Br.)
Oporto
PORTUGAL
Lisbon
Tagus R.
SPAIN
Madrid
Bilbao
Ebro R.
Barcelona
Valencia
Seville
Malaga
Strait of Gibraltar
(Spanish)
MOROCCO
ALGERIA
Algiers
AFRICA
TUNISIA
Tunis
MEDITERRANEAN
5° Longitude West 0° 5° Longitude 10° East from 15° Greenwich

Map Plate, Patented July 5, 1921 · Method of Making Maps, Patented July 5, 1921


25°
30°
35°
40°
45°
50°
55°
60°
65°
70°
75°
O C E A N
Hammerfest
Ob R.
S I B E R I A
A S I A
White Sea
Archangel
Dvina R.
U R A L M T S.
Natural Boundary of Europe
UNION OF SOVIET SOCIALIST REPUBLICS
Helsingfors
Neva R.
Leningrad (Petrograd)
Narva
Revel (Tallinn)
ESTONIA
Yaroslavl
Nizhni Novgorod (Gorki)
Kazan
Vladimir
Moscow
Samara
Riga
LATVIA
LITHUANIA
Kovno
Vilna
Minsk
WHITE RUSSIA
R U S S I A
Saratov
Ural R.
Volga R.
Warsaw
POLAND
Kiev
Kharkov
Dnieper R.
Don R.
U K R A I N E
Lemberg
Rostov
Astrakhan
CASPIAN SEA
Kishinev
Odessa
Sea of Azov
RUMANIA
CAUCASUS MTS.
Natural Boundary
TRANSCAUCASIA
Tiflis
Baku
Bucharest
BLACK SEA
Batum
BALKAN MTS.
Sofia
BULGARIA
Istanbul
Bosporus
Dardanelles
GREECE
Salonika
Angora
T U R K E Y
PERSIA
Athens
AEGEAN SEA
Tigris R.
Bagdad
S Y R I A
I R A Q
Euphrates R.
CYPRUS (Br.)
CRETE
S E A
60°
55°
50°
45°
40°
35°
30°
35°
40°
45°

new devices, and new ways of transportation, manufacturing, and communication spread rapidly from country to country.

The very short and simple list of inventions in figure 22 gives only a suggestion of the thousands of new ways of doing things. Because of these scientific inventions people have been able to make clothes for themselves more rapidly and in greater amounts than before; they have been able to provide lasting and warm houses to shelter them from the changing weather, and they have been able to travel rapidly from place to place, both on land and on sea.

In short, within the past 200 years, Europeans and their descendants in America and other continents have made remarkable strides in controlling nature. This use of scientific knowledge, therefore, was an important reason why Europe became the greatest single manufacturing and trading center of the world.

Summing up: The reasons for Europe's development are like those for the development of the United States.

1. STIMULATING CLIMATE

Europe lies in the north temperate zone; it lies farther north than America, but due to favorable location in the path of westerly winds it has a stimulating and productive climate.

2. SIZE AND VARIED NATURAL RESOURCES

Europe has only about one quarter as much land per person as the United States has, but it has a wide expanse of good farm land. It is rich in some of the raw materials like coal and iron, but lacking in others, such as petroleum, copper, nickel, tin, gold, silver, and rubber.

3. MANY PEOPLE READY TO WORK

Europe has four times as many people as the United States, and they are used to hard work and ambitious to get a good living.

4. INVENTIVENESS IN CONTROLLING NATURE

Even more than the United States, Europe's history in the past 200 years shows that scientific ways of doing things have been thought out and used — in the making of machines and engines, and in manufacturing and selling things.

Do you see that the factors which produced a high standard of living in Europe are the same as those which account for the high standard of living in the United States?

In its Coast Line, Harbors, and Central Location Europe has Advantages for Trade Unequaled in the World

1. Europe's coast line

Much of the land of Europe is so low that the ocean has flowed over it and far into it in many places, forming seas, bays, and harbors. Notice on the map of figure 145 the coast line of the Italian peninsula, the Balkan Peninsula, Turkey, and other land formations.

Many millions of years ago the British Isles were a part of the European continent. After a long time the ocean broke through and flowed over part of the land and formed the English Channel, the North Sea, the Baltic Sea, and the Gulf of Bothnia. Today for 1000 miles large ships can sail inland up through the North Sea around between the Danish and the Scandinavian peninsulas, and up the Baltic Sea.

2. Twelve of the twenty-four most important ports in the world are in Europe

Not only has Europe a long coast line, but it also has many deep, sheltered harbors which no other region in the world can equal. These are usually formed where arms of the sea extended over the low land.

If a region is to become a center of world trade, it must have many well-protected harbors for its ships.

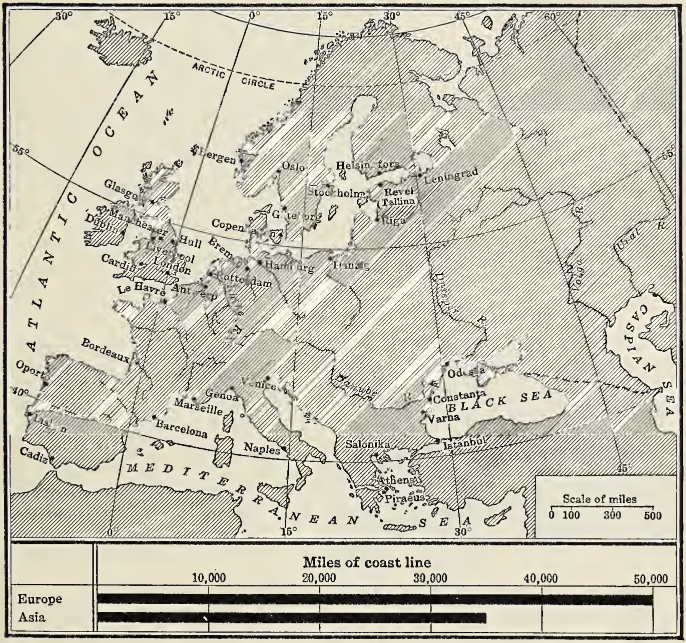
Studies of world trade have shown that of the twenty-four ports that handle the largest amount of business, twelve are in Europe. These ports which play an important part in world affairs are Liverpool, London, Bordeaux, Marseille, Hamburg, Antwerp, Havre, Genoa, Hull, Manchester, Bremen, and Glasgow. Locate these ports on the map of figure 145.

3. No place in Europe is far from a sea

Using a map which has a scale, locate some city of central Europe, say Budapest or Vienna. Note that from Budapest one can reach the sea in three directions in less than 600 miles. Even

Moscow, which is regarded as an inland city isolated from sea trade, is less than 600 miles by river from the Baltic Sea and little more than 700 miles from the Black Sea.

Now compare this situation with that of cities in Asia, South America, Africa, or central United States. In the United States,


30°
15°
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45°
60°
ARCTIC CIRCLE
ATLANTIC OCEAN
55°
Bergen
Oslo
Helsingfors
Leningrad
Stockholm
Revel (Tallinn)
Riga
Göteborg
Copen
Glasgow
Manchester
Dublin
Hull
Liverpool
Bremen
Hamburg
Danzig
Cardiff
London
Rotterdam
Le Havre
Antwerp
R.
Dnieper R.
Volga R.
Ural R.
CASPIAN SEA
Bordeaux
Oporto
40°
Venice
Genoa
Marseille
Barcelona
Lisbon
Cadiz
Naples
Danube
Odessa
Constanta
BLACK SEA
Varna
Salonika
Istanbul
Athens
Piraeus
MEDITERRANEAN SEA
15°
30°
0°
45°
Scale of miles
0 100 300 500
Miles of coast line
10,000
20,000
30,000
40,000
50,000
Europe
Asia

FIG. 145. Europe's long indented coast line provides many fine harbors. Europe is small compared with Asia but the graph shows that it has a much longer coast line. One of the reasons for the growth of European trade lies in the number of good harbors to be found on that continent

for example, Chicago and St. Louis are about 1000 miles from the Atlantic and about 2000 miles from the Pacific. Points in the central part of Brazil are more than 1500 miles from either ocean. Asia is more than 3000 miles wide and 6000 miles long, and many millions of square miles within it are difficult to reach from the sea by river, and the construction of railroads is very difficult by reason of huge plateaus, mountains, or deserts.

Study the map of Europe again. Note that each of the large cities of Europe is on an important river. Find Budapest and Vienna on the Danube, Warsaw on the Vistula, and Cologne on the Rhine. Note that Brussels, Antwerp, Paris, Lyon, and others are all connected with the seacoast by a remarkable system of rivers and canals.

4. Europe's central location gives her unequaled opportunities for trade

At one time western Europe was at the extreme edge of the known trading world. Today it lies in the center of the great trading world between the eastern and the western hemisphere.

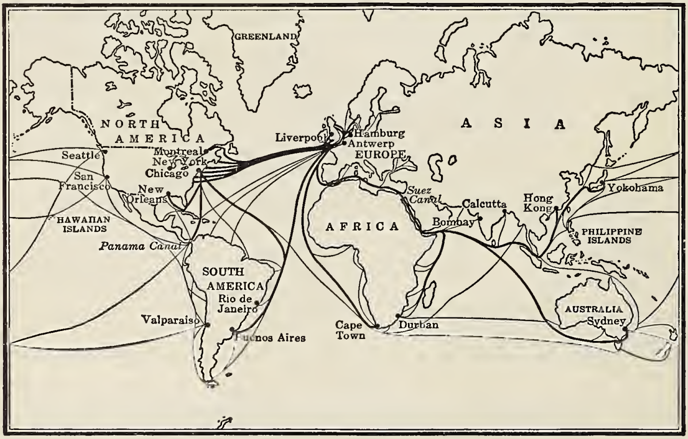
GREENLAND
NORTH AMERICA
Liverpool
Hamburg
Antwerp
EUROPE
ASIA
Seattle
Montreal
New York
Chicago
San Francisco
New Orleans
HAWAIIAN ISLANDS
Panama Canal
SOUTH AMERICA
Rio de Janeiro
Valparaiso
Buenos Aires
AFRICA
Suez Canal
Calcutta
Bombay
Hong Kong
Yokohama
PHILIPPINE ISLANDS
AUSTRALIA
Sydney
Cape Town
Durban

FIG. 146. The world's great sea-paths of trade. The width of the lines indicates the importance of the commerce carried on over each route

The map of the great ocean highways shows that Europe has advantages for trade unequaled by other regions. Pick out, on the map of figure 146, the heaviest bands of sea trade. The heaviest band of all goes from Great Britain, northern France, and Germany to the United States. Notice the next heaviest bands. One runs from Great Britain, France, and Germany around Spain through the Mediterranean, the Suez Canal, the Red Sea, and the Indian Ocean, to the Far East. Another very important band goes from Great Britain and western Europe to South America.

Two or three bands, running from the United States to South America and from western Europe around southern Africa, appear of about equal importance. We can see plainly that three of the four largest lines of trade in the world are carried on with western Europe.

Thus, although Europe lacks some of the advantages which the United States enjoys, she has advantages in trade such as no other continent enjoys. Summed up they are (1) a long coast line, (2) many deep and sheltered harbors easily reached from interior cities, and (3) a central location in the trading world, which she herself has helped to make.

Europe, therefore, is admirably endowed by nature to be a great industrial and commercial center.

EUROPE'S MANY ADVANTAGES HAVE GIVEN HER CONTROL OVER MUCH OF THE EARTH

In the past 400 years the factors you have considered have made Europe the most powerful region in the world. Its resources and its people, its machines and engines, and its swift transportation and electrical communication have led its people to explore and settle in every continent. Since 1600 Europeans have set up industrial and agricultural communities in North America and South America, in Asia, in Africa, and in Australia.

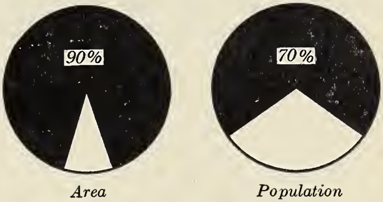

FIG. 147. These graphs show the per cents of area and population controlled by Europeans or the descendants of Europeans. See Fig. 252 for the map of the areas which they control

Let us sum up the examples you have now studied of how they did it: (1) People from every European country settled the United States. (2) Britons and Frenchmen settled Canada. (3) Dutch, Portuguese, Belgian, French, Italian, and British people settled large colonies in Africa. (4) The French took Indo-China, the British conquered most of India, and both countries introduced industrial ways of living into these new regions. (5) The British, French, and Germans took many ports, cities, and regions in

China, built western factories, stores, and banks, and developed modern trade (for this story see Chapter XIX). (6) Russians moved eastward from Europe and settled the territory across Asia. (7) In addition to settling in these large regions Europeans of many nationalities have taken islands, ports, and other scattered bits of land over the entire earth.

In a later chapter you will learn that the Spaniards and Portuguese went into Central America and South America after 1500, where they conquered the Indians and developed governments and ways of living much like those they had left.

Today Europeans or their descendants control 90 per cent of the area and 70 per cent of the people of the earth.

INTERESTING BOOKS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

*Allen, Nellie B. Europe. Ginn and Company, Boston, 1928.
Carpenter, Frank G. Europe. American Book Company, New York, 1924.
*Clark, Vinnie B. Europe. Silver, Burdett and Company, New York, 1925.
*Huntington, Ellsworth, and Cushing, Sumner W. Modern Business Geography. World Book Company, Yonkers, New York, 1925. The best single reference on the "geography" of Europe. See Chapter XVIII (The Geographical Conditions of Manufacture) and Chapter XXI (What Europe does for a Living).

UNIT VIII

EUROPE FROM 1914 UNTIL TODAY

EUROPE FROM 1914 UNTIL TODAY

In previous chapters we have studied carefully the ways of living in four European countries — Great Britain, France, Germany, and Russia — and the way all of them built up empires. In Chapter XIII we studied the factors that made Europe the greatest industrial and commercial region in the world. But throughout this study our attention has been centered mainly upon one or another of the single countries and, for the most part, upon their development up to the time of the World War.

In Chapter XIV, therefore, we shall sum up the facts that we have already learned concerning the dependence *of European countries upon one another; that is, we shall continue the study of the* interdependence *of countries which we began in* An Introduction to American Civilization. *We shall try to understand the international system of transportation and exchange of goods which the Europeans have developed since 1850. We shall see the countries of Europe exchanging food, raw materials, and manufactured goods with one another. We shall see to what extent the people in one industrial country are dependent for their living upon those of another country.*

We shall ask other important questions; for example, Were there dangers in this growing interdependence? *Was it possible that the system of transportation and trade might break down?*

In August, 1914, these European countries plunged into a great war with one another, which affected the lives of people throughout the entire world. Nothing else has happened in modern times that is of so great importance.

In Chapter XV we shall inquire concerning the war itself — how it upset the life of Europeans, how it changed the governments of Germany, Russia, and other countries. We shall get a glimpse of the destruction brought about by the war — of the breakdown of manufacturing, transportation, and trade, and of the terrible cost in life and property.

Then, in Chapter XVI, we shall study the recovery of Europe. The end of the World War came more than ten years ago. In 1919 several hundred million Europeans faced the task of rebuilding their factories, their homes, their transportation systems, and their trade with one another. How much success have they had? To what extent is Europe recovering from the destruction of the war?

CHAPTER XIV

THE INTERDEPENDENCE OF EUROPEAN COUNTRIES IN 1914

What were the conditions in European countries in the spring of 1914?

When Charlie Chaplin visited London in 1921, he said to H. G. Wells, the English author: "People are not laughing and careless here as they used to be. It isn't the London that I remember of 1914. The people are anxious. Something hangs over them."

The Londoners of early 1914, whom Chaplin remembered, seemed fairly prosperous and rather care-free. They appeared confident of the future and seemed sure of steady work and of increasing wages. English life was running smoothly, and there were time and money for sports, for the theater, and for other recreations.

The condition which Chaplin saw in 1921 was a decided contrast to that in 1914. Thousands of people were walking the streets of England's cities looking in vain for work. The coal mines had closed. Workers were greatly worried by the fact that their wages bought fewer loaves of bread and less clothing than they did in 1914. English citizens were loaded down by the huge taxes that their government had laid upon them.

Why, you will ask, this startling change within the short period of only seven years?

Because Englishmen, like most of the other Europeans in 1914, were living a very *interdependent* kind of life, and that life had been upset. Their work depended upon a great system of transportation, communication, and trade, which bound the countries of Europe closely together commercially, as the various sections of the United States are bound together. If it should break down, their jobs and hence their very living would be endangered.

That is just what did happen — the system broke down and a startling change came to the people of Great Britain, France, Germany, and other countries.

In order to understand this change we shall first need to learn how the vast network of trade, transportation, and communication knit together the millions of people in Europe in 1914.

THE FIRST EXAMPLE OF EUROPEAN INTERDEPENDENCE: AN EFFICIENT SYSTEM OF TRANSPORTATION

1. A fine system of railways tied together all the countries of Europe

In Paris in the spring of 1914 one could board a fast express and travel rapidly in comfort through Europe from France to any other country. It was as easy to travel as in the United States. From Paris to Berlin? Oh, yes, in a day. From Berlin to Vienna? Little more than an overnight trip. From Vienna to St. Petersburg? A journey of a day and a half on one of the fast transcontinental express trains.

Could one go from western Europe to the Near East easily by land? Yes, indeed. There was a trunk railway that ran over the old route leading from Paris, Rome, Vienna, or Berlin to Constantinople. Thence one could go southeast through the Holy Land to Cairo in Egypt and, with some gaps, to Bagdad and the Persian Gulf.

A great European system of railways was humming constantly with travel and trade. One could even ship goods by rail from western Europe almost to the very center of ancient Asia. There were fewer railways in Asia; schedules were slower, and travel was not so comfortable as in Europe, but nevertheless there were railway connections of a sort for freight and passengers.

In the spring of 1914 Europe had 250,000 miles of railway tracks — approximately the same number as the United States. These tracks were substantially built of fine steel rails on solid roadbeds. Over them heavy engines hauled rapidly their well-equipped cars loaded with passengers and freight. On the express lines trains ran as swiftly and as reliably as do the great transcontinental expresses of our country — some of them more swiftly. For example, the Liverpool-to-London express traveled the greater part of its run at a speed of 80 miles an hour, and another English train made the longest nonstop trip of any train in the world.

Many European people absolutely depended for work, for food, for comfort, even for their very lives, on these railroads which ran across the boundaries of the different countries. Great engines hauled long trains of cars carrying wheat from Russia and southeastern Europe to Germany and other manufacturing countries. The western cities of Germany were sending millions of tons of coal, and iron, and steel manufactures to all the countries of Europe. From Italy grapes, wine, olive oil, nuts, and manufactured goods sped northward to be sold in the markets of France, Germany, and Great Britain.

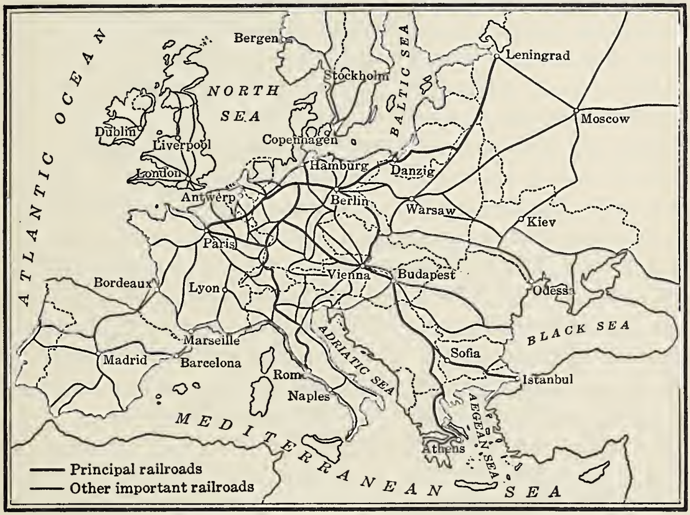
ATLANTIC OCEAN
NORTH SEA
BALTIC SEA
Bergen
Stockholm
Leningrad
Moscow
Dublin
Liverpool
London
Copenhagen
Hamburg
Danzig
Antwerp
Berlin
Warsaw
Kiev
Paris
Vienna
Budapest
Odessa
Bordeaux
Lyon
BLACK SEA
Marseille
Sofia
Madrid
Barcelona
Rome
Istanbul
Naples
ADRIATIC SEA
AEGEAN SEA
Athens
MEDITERRANEAN SEA
Principal railroads
Other important railroads

FIG. 148. This map shows the principal railways of Europe and the cities which they connect

The most important thing for you to remember about these railroads was that *they were international,* for on the great trunk lines the trains continually crossed the boundaries between countries. Thus in the spring of 1914 goods and people were transported regularly and quickly on the *international* railroads of Europe.

2. A fine system of waterways also tied together the countries of Europe

If you will look carefully at the map facing page 328, you will notice the great number of rivers and canals that were useful for shipping all over Europe. Many of them crossed international boundaries, so that Europe was tied together not only by railways but by waterways as well. In 1914 these waterways played a great part in the international life of the European nations, for in their use of waterways the European countries are more advanced than our own country.

They are also more favored by nature in the shape of the continent and in the number of rivers that connect the interior to the seas. Europe, you will remember, is really a narrow peninsula reaching out on the western edge from the great continent of Eurasia. It is very narrow — there is hardly a point in central Europe which is more than 500 miles from some seacoast. In addition nearly every country of Europe has large navigable rivers flowing through it to the ocean, where good seaports grew up. In this way many European countries have easy access to the sea without having to ship goods through another's borders.

Navigable rivers flow through fairly level land for long distances. Like the railroads, some of the important ones pass through several countries. On the map find the Danube, the Rhine, the Elbe, the Vistula, the Rhône, and the Moselle. Notice through which countries each river flows. How many countries does the great Danube join together? Which are they? Which countries are bound together by the Rhine? the Elbe? the Moselle? the Rhône? Notice also on the map the port cities which have grown up at the mouths of each.

Water transportation had proved so much cheaper than land transportation that by 1914 every European country had spent millions of dollars for its improvement. Channels had been deepened, river banks had been strengthened, and docks had been built, and in addition the rivers had been connected by means of canals.

Canals had been used in Europe for hundreds of years; but as manufacturing developed in the nineteenth century and better means of transportation were needed, the old canals were deepened and widened and new ones were dug.

So many canals have been constructed in France, for example, that today it is possible to carry goods from its northern to its southern boundaries, and from its eastern to its western boundaries, entirely by water. This excellent linking by canals aids transportation on navigable rivers.

The Seine, with its canals and branches, carried each year to Paris huge quantities of coal, cement, stone, brick, grain, foods, and wines. This system and others in various parts of France formed a cheap and efficient network of transportation for France. Some of these waterways were international, that is, the people of two or more countries used them.

Germany also had an efficient system of rivers and canals and was tied to other countries by means of it. The Rhine begins in the Alps in Switzerland, flows northward through Germany into the Netherlands, then out into the North Sea — a distance of 850 miles. In the valley of the Rhine, or near it, lie the principal coal fields and many of the iron mines of Germany and France. Up and down the stream every year a tremendous volume of freight was carried, some of which was French and some German (at the present time this traffic averages more than 60,000,000 tons a year). In 1914 canals joined the Rhine to the neighboring rivers. Rivers and canals formed a continuous chain for shipping.

Germany has four other great river systems besides the Rhine. These are the Weser, the Elbe, the Oder, and the Vistula. Two of them cross into Germany from other countries, and all of them are linked by canals.

Today Germany has 7614 miles of waterways, of which 6202 miles are dredged rivers and 1412 miles are navigable canals. Some of the canals of Germany do not stop with the borders of the country, but extend beyond into France on one side and Poland on the other, connecting German rivers with the rivers of these other countries.

What we have said about waterways in France and Germany is true also of other countries of Europe. The whole continent was bound together in 1914 by a fine network of rivers and canals.

3. Europe had an international system of roadways

In ancient days the Romans built very good roads throughout much of Europe. The lands which became France, Spain, Great Britain, and part of Germany and Austria-Hungary were conquered Roman provinces. Communication between the capital at Rome and each of these distant territories was made possible by a system of stone roads. At that time there was a saying "All roads lead to Rome," for even in those far-off days all the countries of Europe which were parts of the great Roman Empire were linked together for transportation and communication.

After the fall of Rome, however, these good roads were not used much. The communities of Europe lived by themselves, and connections between them were neglected. The few cities which were growing up made little attempt either to keep the old roads in good condition for travel or to build new ones; for in those days there was always the danger of attack by an enemy, and the people of the cities felt safer if the land approaches to them were not too easy. The roads became so bad that they were almost impassable, and the little communication that was carried on between countries made use of the sea or the rivers. That is one important reason why many of the European cities grew up on rivers.

When the Industrial Revolution began, and trade became much more active, the people of every country felt the need for connecting towns and cities by better highways. In some places the old Roman roads were rebuilt. Many new ones were constructed, especially near the manufacturing cities, and governments levied taxes for road building and repairing. In the wealthier nations automobiles and motor trucks came slowly into everyday use, and roads were greatly improved.

In 1914 most of the countries of western Europe had hard, rolled highways. One could drive an automobile on fine macadam or cement roads throughout Great Britain, France, Switzerland, Germany, Belgium, the Netherlands, Austria, and parts of other European countries. The traveler did not meet nearly so many automobiles as on the highways of the United States; but the use of them was increasing, and near the largest cities light motor trucks were taking the place of horse-drawn or ox-drawn wagons.

Like the railways and the waterways, the roads of Europe cut across national boundaries and tied the countries together. Frenchmen were trading across them with Germans, Belgians, Austrians, Spaniards, and Russians, just as the people from all these countries were trading with those of every other country. By 1914 all these means of transportation and communication were working smoothly together, bringing about a constant flow of people, news, and goods from one corner of Europe to the other.

The Second Example of Interdependence: the Distribution of Coal and Other Fuels

Manufacturing, transportation, and communication in Europe, as in the United States, depended absolutely on mechanical power, that is, on power made by steam engines, gas engines, or electric generators. That meant that the manufacturing people of each country depended on a ready supply of fuel (coal or oil) or water power. In Europe as in the United States these were the three great sources of mechanical power, and the greatest of these was coal.

As we have seen in our study of each of the industrial countries, Europe had vast stores of coal. Coal supplied the driving power to run trains, canal boats, river boats, and steamships. Coal kept food, raw materials, and manufactured goods moving within each manufacturing country and from one country to another.

Without coal the roaring steel mills of the Ruhr valley, the Lorraine district, or the Birmingham-Manchester region could not run. Without coal Germany's industrial workers would be unemployed. Without coal in 1914 raw cotton could not have been carried in such great quantities from Egypt or the United States to England, and English spinners and weavers would have been out of work. Without coal the trains of the busy transcontinental railroads would have stopped running, and the city people of Europe would have suffered in winter and died for lack of food. Truly coal was *the all-powerful king of industrial Europe* in 1914.

While there was coal enough on the continent, some of the countries did not have enough of it. England had enough and some to spare, and Germany had great mines on both her western

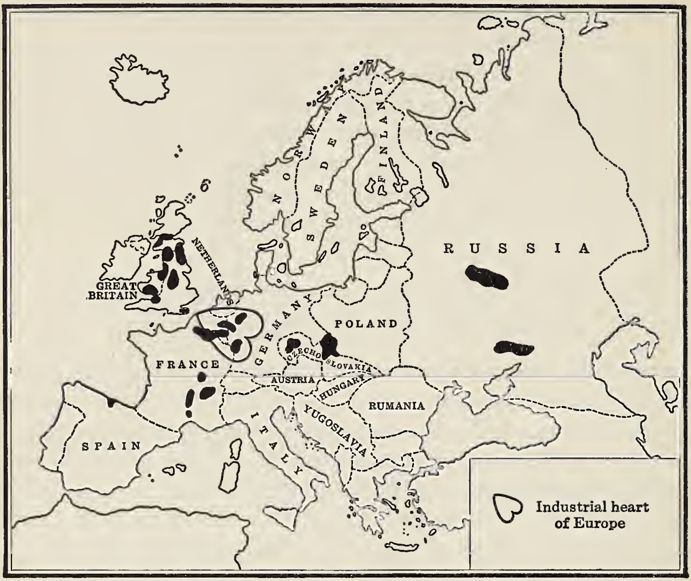
RUSSIA
NORWAY
SWEDEN
FINLAND
GREAT BRITAIN
NETHERLANDS
GERMANY
POLAND
CZECHOSLOVAKIA
FRANCE
AUSTRIA
HUNGARY
RUMANIA
YUGOSLAVIA
ITALY
SPAIN
Industrial heart of Europe

FIG. 149. The chief coal deposits of Europe. Compare this map with that of figure 151

and southeastern boundaries. *But France and some of the smaller countries lacked coal* and depended on the others for much of their supply. If that supply should be cut off, they would suffer unless far-off United States or other regions could send it to them.

So much for coal. What about oil?

In *An Introduction to American Civilization* we learned that, after coal, oil is the most important fuel for driving engines. Recall the story of the astonishing increase in the world's production of oil after 1900. European automobiles, motor trucks, even trains, steamships, and factory machines, were run by the power of oil-burning engines. The British navy and many British merchant vessels were burning oil in place of coal, and the ships of other nations were following England's example. All the industrial countries of Europe were beginning to use large quantities of oil.

The map of figure 150 shows the startling fact that in Europe almost no oil is found. In 1914, therefore, the indus-

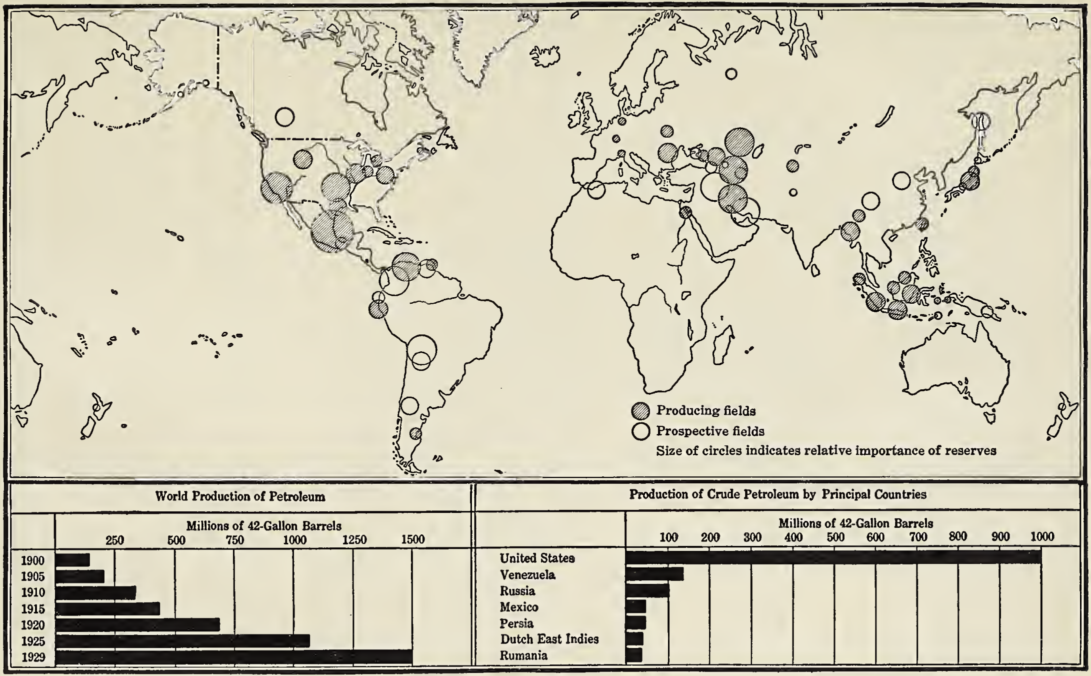
Producing fields
Prospective fields
Size of circles indicates relative importance of reserves
World Production of Petroleum
Millions of 42-Gallon Barrels
250
500
750
1000
1250
1500
1900
1905
1910
1915
1920
1925
1929
Production of Crude Petroleum by Principal Countries
Millions of 42-Gallon Barrels
100
200
300
400
500
600
700
800
900
1000
United States
Venezuela
Russia
Mexico
Persia
Dutch East Indies
Rumania

FIG. 150. The oil resources of the world

trial countries that were using it to run automobiles and trucks, trains, factories, and ships depended for most of their supply of oil on regions which lay outside of Europe — Irak (Mesopotamia), Persia, Mexico, and the United States. The United States alone was producing nearly two thirds of the world's oil supply. Europe, therefore, depended on other parts of the world for its oil.

Next to oil in importance is the third main source of power — moving water. We read that, in the United States, hydroelectric power stations were being built where large rivers could be dammed. There electric power was being made, and from powerful generators electricity was being sent over miles and miles of copper wire. This gigantic energy was providing the light for cities, towns, and villages, and the power to run engines in factories hundreds of miles away and even to drive railroad trains.

The same conditions were to be found in a few parts of Europe in 1914, where Switzerland and Germany led the way in generating electric power. In the Alps, the Vosges, and other mountain regions where swift streams tumbled down hillsides, electrical power stations were set up to dam the rush of the water and send it through great water wheels. Up and down the Rhine, the Danube, and some other European rivers one might have seen new electric power stations. The power was transmitted across the boundaries of different countries, so that electric power was *international* too.

THE THIRD EXAMPLE OF EUROPE'S INTERDEPENDENCE: THE DISTRIBUTION OF IRON AND OTHER MINERALS

We have learned that in Europe as in the United States the manufacturing of iron and steel also is an important key industry. Without steel there would be no factories, engines, or machines. Without steel, there would be no modern railways, it would be very difficult to span wide rivers with bridges, and the modern ocean vessels, which carry so much trade, would disappear. Iron ore and other minerals which go into the making of steel are the necessary treasures of an industrial nation.

But iron, like coal, in 1914 was not possessed by all the industrial countries of Europe. The best deposits of iron were in a few places — near the boundary between France and Germany, in Spain, and in Sweden. Great Britain had very little iron and depended on the countries we have named for most of her supply. France and Germany both had large deposits, but Germany had more than France. You remember that in 1871 she had taken Lorraine, with its great deposits of iron, from France.

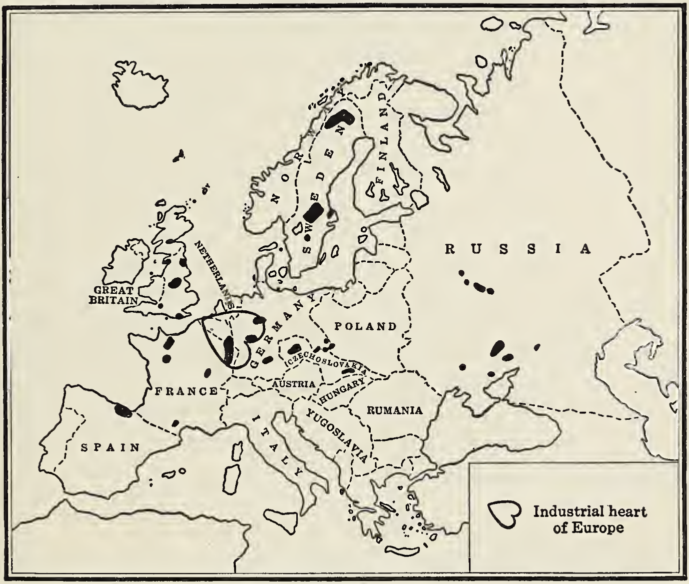
NORWAY
SWEDEN
FINLAND
RUSSIA
GREAT BRITAIN
NETHERLANDS
GERMANY
POLAND
CZECHOSLOVAKIA
FRANCE
AUSTRIA
HUNGARY
RUMANIA
YUGOSLAVIA
ITALY
SPAIN
Industrial heart of Europe

FIG. 151. The chief iron deposits of Europe. Iron and coal are found close together in the region outlined by the heart (see figure 149). Does this help to explain why this part of Europe has become the industrial heart of the continent?

Furthermore, the other minerals needed to make steel — nickel, vanadium, manganese, etc.— were not possessed in large quantities by any industrial country of Europe. They had to be brought from Asia and South America.

So, for iron and the other materials of which steel is made, some of the European countries were dependent upon others and, indeed, upon other continents.

THE FOURTH EXAMPLE: INDUSTRIAL COUNTRIES DEPENDED UPON AGRICULTURAL COUNTRIES FOR FOOD

We have seen how England and Germany had begun to buy much of their food from other countries. In both countries the city dwellers who had left their farms began to depend on the farms of neighboring and far-off countries for their daily fare. In England this change had gone much further than in Germany. About 80 per cent of the English people were living in towns or cities in 1914. The other 20 per cent could not possibly hope to raise enough food to feed such a vast number of people. So wheat was brought to England from Canada, Australia, Argentina, and the United States. More perishable food products were brought to England from the nearer countries of Europe. Milk, butter, fish, and vegetables arrived in England every day from France, Denmark, Sweden, and other farming nations.

Fifteen per cent of Germany's food in 1914 came from beyond her borders — from Russia, Rumania, Scandinavia, and other regions. In France nearly half the people had remained on their farms, but France too was becoming an industrial nation and was beginning to buy a little food from other countries.

So in 1914 within each industrial country there was much dependence on other countries for food.

Summary of conditions in the spring of 1914

In 1914 western Europe was a great whole in which for the comfort of the people nearly every part had to work with every other part. The dependence of European countries upon other parts of the world was almost exactly like the dependence of the American people upon peoples of other countries, about which you have studied. In Europe also the cities depended upon the farms for food, and the farms depended upon the cities for manufactured goods. Each region depended upon every other region, each industry upon other industries, and even inside every factory the work of one department of the building depended upon the work of every other department. Does this dependence of European countries upon one another remind you of the dependence of one section of the United States upon other sections?

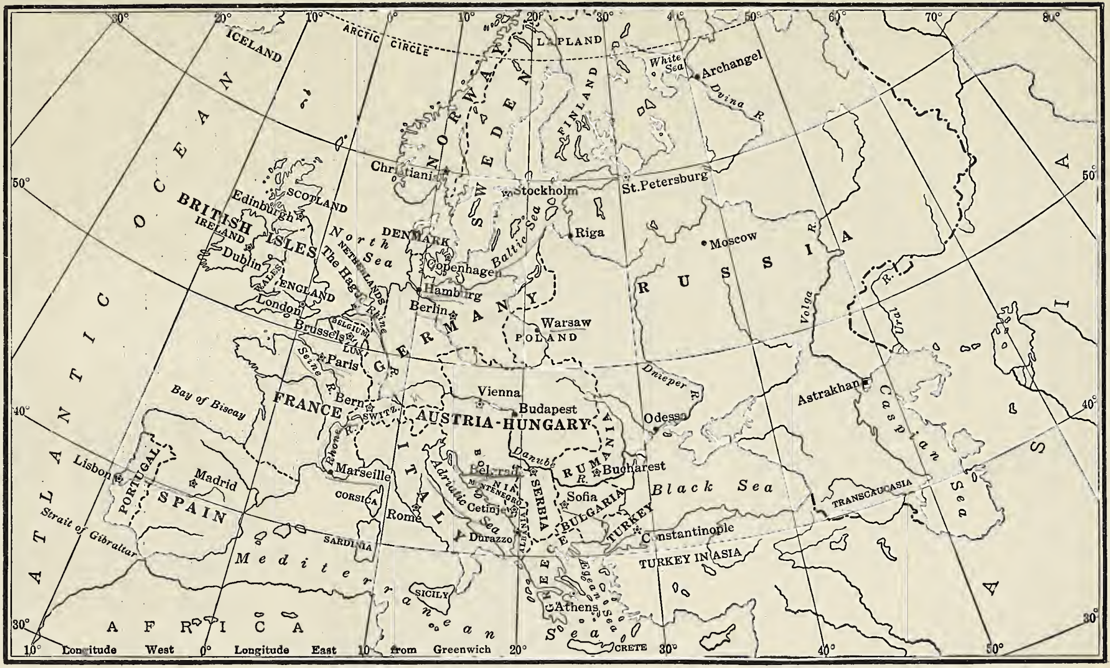
ATLANTIC OCEAN
ICELAND
ARCTIC CIRCLE
LAPLAND
NORWAY
SWEDEN
FINLAND
White Sea
Archangel
Dvina R.
Christiania
Stockholm
St. Petersburg
Riga
Moscow
RUSSIA
Volga R.
Ural R.
ASIA
BRITISH ISLES
SCOTLAND
Edinburgh
IRELAND
Dublin
WALES
ENGLAND
London
North Sea
DENMARK
Copenhagen
Baltic Sea
NETHERLANDS
The Hague
Rhine
Hamburg
Berlin
GERMANY
Warsaw
POLAND
BELGIUM
Brussels
LUX.
Paris
Seine R.
Bay of Biscay
FRANCE
Bern
SWITZ.
Rhone R.
Marseille
Vienna
Budapest
AUSTRIA-HUNGARY
Dnieper R.
Odessa
Astrakhan
Caspian Sea
BOSNIA
Belgrade
Danube
RUMANIA
Bucharest
Black Sea
TRANSCAUCASIA
MONTENEGRO
Cetinje
SERBIA
Sofia
BULGARIA
TURKEY
Constantinople
TURKEY IN ASIA
ITALY
Adriatic Sea
Rome
Durazzo
ALBANIA
GREECE
Ægean Sea
Athens
CRETE
CORSICA
SARDINIA
SICILY
Mediterranean Sea
Lisbon
PORTUGAL
Madrid
SPAIN
Strait of Gibraltar
AFRICA
Longitude West
Longitude East from Greenwich
10°
0°
20°
30°
40°
50°
60°
70°
80°

FIG. 152. Europe in 1914

Villages, towns, cities, countries — all depended upon one another. No one country could live to itself any more than one person could live to himself. All were interdependent.

No one of the countries of western and central Europe was very large. Most of them were not much larger than one of our states. No one of them had enough coal, iron, and other minerals to provide for its own needs. Only France, of the three great European manufacturing countries, raised sufficient crops to feed itself independently.

These are but a few brief illustrations of many that could be cited — examples of the way in which European nations, in the spring of 1914, were closely connected by bands of trade.

Germany became the Very Center of this Vast European Land Trade

In 1914 the pivot of this remarkable system of trade in Europe was Germany. She was well located on the sea and was in a central position among the other countries. Her railroads, rivers, canals, and roads led directly and quickly to the other countries that lay on the north, south, east, and west.

From the countries to the southeast and east — Austria-Hungary and Russia — Germany was buying wheat and other foods and raw materials. To Russia in exchange she was sending locomotives, cotton goods, machinery, and fertilizers — to mention only a few of many exports. To the north lay Denmark, which could be reached by land, and Norway and Sweden, which could be reached quickly and easily by sea. On the west France, Belgium, and the Netherlands

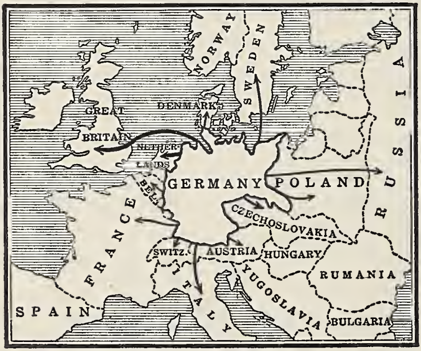

FIG. 153. The arrows indicate the European countries with which Germany trades, and the width of the arrows indicates the importance of the trade carried on

were within easy reach for land trade. On the south lay Switzerland and Italy, Rumania, Serbia, and the other countries in the Balkan Peninsula. Germany had a nearly perfect system of land trading connections in 1914.

Ideas also spread across National Boundaries

There is one more important thing which the people of Europe exchanged freely, and which helped to make them dependent upon one another. This was the "food for thought," namely, ideas. Ideas, like trade, were no respecters of national boundaries. As means of travel and communication increased, the knowledge of new and better ways of living spread more widely and more quickly.

Early in the 1700's the ideas for making new machines and engines crossed the boundaries of all the countries. Englishmen, Frenchmen, Italians — all were working on the same ideas and were using the knowledge of men of every country who had gone before them. Scientists for a long time had recognized that science was international rather than national. German, French, English, Russian, and Italian leaders in scientific study were eager to share their ideas with their fellow workers in neighboring countries.

Let us consider one example. The spread of ideas for improving weaving shows very well how little the boundary lines separating countries can prevent people from exchanging knowledge. In the late 1700's Englishmen who had been using the new spinning machines for making thread went to France, where the French merchants were astonished at the amount of thread the Englishmen had to sell. The Englishmen explained the reason for this by telling of the new inventions. They added, however, that the looms were not able to keep up with the spinning machines and that people ought to be inventing weaving machines. This idea spread from country to country throughout Europe.

Before long not only the English but the French, Dutch, and Polish people were all interested in inventing a weaving machine. At last an Englishman, Edmund Cartwright, worked out a crude power loom. It was neither very efficient nor very successful; but other people seized upon the idea, and within 30 years fairly efficient power looms were perfected on which simple designs could be woven. Inventors of different countries were working constantly to improve these looms, and in 1801 a Frenchman, Joseph Jacquard, using the knowledge of other people before him, invented a wonderful loom on which patterns of very complicated colors and designs could be woven. Since his time many other improvements have been made — some by Americans, some by Europeans.

This is only one instance of the way in which the ideas of inventors of one country were shared and adapted by those of other nations. Many ideas for lessening hard work and for making things more rapidly and efficiently were passed from one country to another after machines began to be used. It is sometimes impossible to say just who invented a particular thing; for many people were at work on it, and many ideas from all over the world went into its improvement.

In 1914, as today, ideas did not take years or even months to cross national boundaries. They crossed them "overnight." A new invention, perhaps in Germany, was reported next morning in the newspapers of London, Paris, New York, Tokyo, Bombay, and Cape Town. Who knows how many inventors were stimulated by this news to go to work that day on another invention which might be better?

Not only sciences but customs, art, and literature passed from country to country regardless of the nationality of the peoples.

Figure 154 illustrates the way in which ideas of dress spread. Note that while no two men shown in the illustration are natives of the same country (indeed, three continents are represented), all wear the same kind of clothing. Photographs of life in the Orient or in modern Turkey in 1914 would have shown that even in those distant countries European ideas of dress were being rapidly adopted, and European customs were spreading around the world.

With the improvements in transportation and communication between countries travel increased, and books, newspapers, and magazines printed in one country were sold and read in another. Students from each country went to study in the universities and technical schools of others. Professors of colleges in one country "exchanged" positions from time to time with professors in other countries. In these and many other ways ideas spread from country to country.

The writings of the novelists and poets of one country were widely read and discussed in other countries. Paintings and sculpture which were the work of the artists of one people were often exhibited in other countries and bought by people living there.

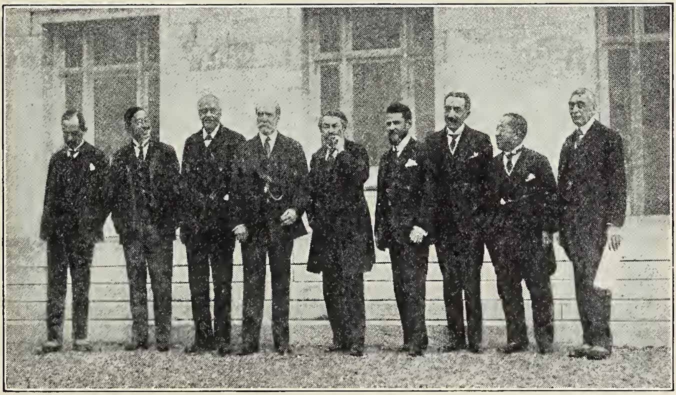

Fig. 154. In this group of famous statesmen is one citizen from each of the following countries: Japan, Belgium, England, Netherlands, China, the United States, France, Italy, and Portugal. Could you tell from which countries they have come by the way they are dressed?

In every branch of life the peoples of the world were coming closer together and depending more and more upon one another.

The care-free life of most Europeans in the spring of 1914

People of every nation of Europe were working hard and prospering in the spring of 1914. Most of them had no idea that a terrible danger was shadowing their lives, although a few of the political leaders of each country saw plainly the peril which was drawing nearer and nearer. The mass of the people, however, believed that they were living in a world of nations which had forgotten war.

When housewives bought food in the shops of Berlin or London, they took little thought of the interdependent system of agriculture, manufacturing, transportation, and trade which had brought the food from many lands and placed it on the shelves for them to buy. They accepted without thinking about it the smooth running of their railroads, factories, and stores, which had made this possible. When they did think about it, most people felt that the great system upon which they depended would go on forever.

Certainly they had little notion that within four years millions of them, their neighbors, friends, families, and relatives, would be dead. They little thought that the farms of their country would be laid waste, that they themselves would be penniless if not in debt, and that their government too would be sunk deep in debt.

They could not know that their trains would cease to run, and that their places of amusement would be closed and almost forgotten for a long time. They did not dream that merchants with whom they traded would be bankrupt, and that their food would be rationed out to them in small portions, as in times of famine, earthquake, and flood. They could not foresee that they would dread the appearance of the daily newspaper with its terrible lists of the dead. They did not know that the worst possible calamity that could befall a world of people was only four months away.

Serious Dangers hung over the People of Europe[1]

Trouble was brewing in Europe! A few thoughtful people saw the danger that was coming. They realized how much the countries were coming to depend upon one another and saw that if anything upset the world-wide system of producing and exchanging goods the whole world might suffer.

Furthermore, they saw four real dangers and tried to arouse the people of Europe to avoid them: First, the danger in the race between England, France, Germany, Russia, Italy, and other countries for trade or lands in other continents. Second, the danger in the growing national spirit of fear and suspicion toward other countries that was spreading among the people of each country. Third, the danger in the rapidly increasing armies and navies of the leading European countries and the power of the military men within each country. Fourth, the danger in the secret alliances which the rulers of the great European countries were making with each other.

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[1] This discussion of the movements and influences that led to the World War is based upon the most recent authoritative accounts of eminent historical scholars. We regard Sidney B. Fay's *The Origins of the World War* (The Macmillan Company, New York, 1928) as the best standard work in English.

The first danger: the rivalry for world trade and empire

The first of these dangers — the rivalry of the chief countries for trade and foreign lands — we have already discussed in preceding chapters. We have seen how Great Britain, France, and Germany had each taken colonies in Asia and Africa.

The leaders of each country were suspicious of the leaders of the others, and the statesmen of each country feared that the others might become powerful enough to threaten the growth of their own country. Since they were all on the look-out lest that happen, each country was ready to take sides against any rival who might become too powerful.

We must not forget that the mass of the *people* of Europe did not feel this rivalry of the nations for trade or territory. They went about their daily tasks as they had always done and left such schemes as empire-building to officials of the government and the big traders. The people as a whole in all the rival nations neither knew nor cared deeply about what these statesmen were doing. The people could scarcely know what the plans were, for they were made behind closed doors of government offices. Even the legislators in the British Parliament and the members of the French and German national legislatures did not know.

The second danger: the growing spirit of antagonism among the European countries

Without realizing it the people of the various European countries had been changing their ways of thinking about one another. For the first time in the history of Europe the *farmers and mechanics as well as wealthy people had been learning to read and write.* Inventors had perfected printing presses which turned out huge numbers of newspapers every day. In almost every city and large town of the leading countries people could now buy a daily newspaper for a few cents.

By 1914 newspapers and magazines were read widely, and many important ideas were being circulated among the people. This had a deep effect upon their minds, and many of them began to form opinions on subjects about which they had never before thought.

Along with the new way of printing came public use of the telegraph (1844) and the telephone (1876). With these inventions it was possible to flash news quickly to every corner of Europe from every part of the world.

More rapid means of transportation — steamboats, railroads, etc. — helped the people of the entire world to trade with one another. It also spread the ideas of one people among other people and made it possible for the peoples of the world to keep informed about each other.

The new ways of communication — printing, telegraphing, and telephoning — were being used by the people of all the European countries. Communication and transportation had made the people of Europe acquainted with one another.

It seems as if people would have come to understand one another better as they became better acquainted and that they would have been able to live together more happily and kindly. No doubt, to some extent, they did live together more peacefully, but the modern communication also helped to increase fear and suspicion among the peoples of Europe. Often the European newspapers and other publications printed articles that stirred up suspicion among the masses of the people. Sometimes, it must be said, untruths were printed about other countries.

Printed matter was actually used to arouse hatred. Sometimes politicians of Great Britain, France, Russia, Germany, or some other country wanted their people to think that their country was in danger of being attacked by a powerful neighboring country; so they hinted in newspaper statements that the people of a rival country were scheming to destroy their homes and seize their property. Many readers began to fear for their lives, and slowly some began to imagine that every person of the rival countries was a personal enemy.

At the same time the newspapers made these people believe that their own country was innocent, and that their own government would be forced to defend itself against its enemies. They began to love their own country more and more and to feel that their country was better than any other, until finally some of them began to think that their country was chosen to be the leader of the world. This was the attitude of many British people toward the British Empire, and we have clear proof that it was the attitude of many Germans toward the German Empire.

The German emperor once remarked:

> Nothing must go on anywhere in the world in which Germany does not play a part. . . . We are the superior race in the fields of science and of art; we are the best colonists, the best sailors, the best merchants.[1]

The leaders of Germany had united through the newspapers, the magazines, and the schools to convince the German people that they were born to rule other European peoples, and thus a war spirit was gradually developed. The emperor once again remarked:

> It is not my opinion that our German people conquered and bled thirty years ago under the leadership of their princes in order to be pushed to one side when great and foreign decisions are come to. Were that so there would once for all be an end of the world power of the German nation, and I am not going to allow that to happen. To use the fittest and if necessary the most drastic means to prevent this is not only my duty but my noblest privilege.[2]

In France, in England, and in Russia the same antagonistic spirit was growing. In France many people were beginning to feel that they were "Frenchmen" and that because they were Frenchmen they were quite different from Germans, indeed enemies of Germans. When in England people could read at the breakfast table that Germany or Russia was threatening their empire, they became excited in defense of the British Empire. Suppose these same people had read German or Russian newspapers. What would they have thought then?

Many of the Russian people too began to feel that it was their right to have a seaport on the Mediterranean, and that if necessary they should fight for it.

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[1] Albert E. McKinley (Compiler), *Collected Materials for the Study of the War*, p. 27. McKinley Publishing Company, Philadelphia, 1918.

[2] Charles Seymour, *The Diplomatic Background of the War*, pp. 92–93. Yale University Press, New Haven, 1916.

Thus, in spite of the fact that the people of the new industrial civilization were living in much the same ways, thinking much alike, and doing much the same kinds of work, they came to believe that the people of countries other than their own were very different. They began to be suspicious of those people, and even to fear and to hate them.

The third danger: the building of great armies and navies

From 1870 to 1914 the great nations of Europe all built up huge armies and powerful navies, largely in rivalry of each other.

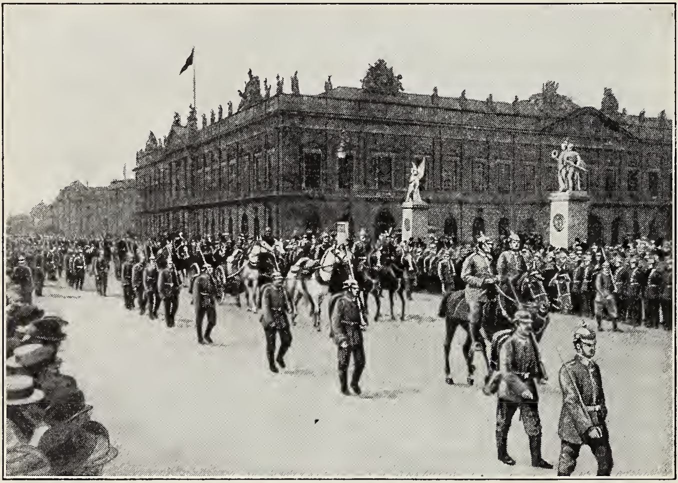

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FIG. 155. By 1914 many countries had large armies. Regiments of soldiers were often to be seen marching through the cities of Europe

In the 1870's the armies of Great Britain, France, Germany, and the other leading countries of Europe were fairly small. Germany then had the largest army, for Prussia had long been a nation of military men; but even Germany had only 400,000 men, and Great Britain and France each had about 200,000.

What a change had occurred by 1914! Russia, Germany, France, and Austria each had about 4,000,000 able-bodied men trained for warfare.

So great was the preparation for war at that time that travelers referred to Europe as "an armed camp." From railroad trains in the spring of 1914 one might see squadrons of cavalry riding, soldiers marching, young boys being trained to march and to handle guns, and artillery men practicing long-range shooting. It was evident indeed that the governments of the leading countries were expecting to need troops.

Navies as well as armies were growing. Shipyards in the harbors of Great Britain, France, Germany, and Russia — and even of the smaller countries — were humming with activity. They were busy constructing great steel-armored battleships, cruisers, submarines. Each of the leading governments was spending every year on its navy an increasing amount. The cost was enormous.

FIG. 156. A part of the British fleet in 1914. Other countries in Europe — France, Germany, Russia, and Italy — also had powerful fleets, although none so large as that of Great Britain

The table shows very clearly how three nations rivaled one another in building navies. Great Britain spent nearly five times as much on its navy in 1914 as it did in 1878, Germany spent about eight times as much, and Italy nearly six times as much.

AMOUNT SPENT FOR NAVIES IN 1878 AND IN 1914

	1878	1914
Great Britain .	$53,000,000	$244,000,000
Germany . . .	14,000,000	117,000,000
Italy	8,000,000	44,000,000

The other countries — France, Russia, and Austria-Hungary — increased their navies very rapidly also, although they did not spend such huge sums.

The fourth danger: the secret alliances which European rulers made

In 1871, immediately after the war between France and Germany, the statesmen of the leading countries of Europe began to prepare for another war.

Two hundred years before that time a French king had taken Alsace and Lorraine from Austria. In 1871 France had lost the two regions to Germany, and she no longer had these valuable coal and iron deposits. Frenchmen never ceased to mourn the loss of this territory and to resent deeply its seizure by Germany.

The German emperor and the officials of the government knew that France had not forgotten, and to protect themselves in a possible war with France they decided to establish friendly relations with other nations. They made a secret agreement with the emperor of Austria-Hungary and the Czar of Russia, by which they would all help one another in case one of them were "attacked" by another nation. This agreement was not known to the *people* of these countries for many years.

The French and British governments also had secret agreements with each other and with other countries, in which the statesmen of these two countries agreed to help each other should trouble arise for either of them. Later Russia withdrew from her agreement with Germany and made one with France and England, and this alliance between England, France, and Russia was called the *Triple Entente*.

Germany, in the meantime, had made a secret agreement with Austria-Hungary and Italy, forming what was called the *Triple Alliance*.

By 1914 the six greatest powers of Europe were lined up, as follows, three against three:

THE TRIPLE ALLIANCE		THE TRIPLE ENTENTE
Germany Austria-Hungary Italy	*against*	France Great Britain Russia

The smaller nations of Europe were included in various treaties, but the six important nations — three against three — were the chief opposing powers of the approaching war.

These secret alliances among countries were therefore a very grave danger to the safety of Europeans, for they divided the continent of Europe into two opposing armed camps, whose leaders feared and suspected one another.

THESE, THEN, WERE THE CONDITIONS OF EUROPE IN THE SPRING OF 1914

Four hundred million European people were scattered through twenty countries, and three fourths of these people lived in six leading countries — Great Britain, France, Germany, Russia, Austria-Hungary, and Italy. The first three of these countries had taken up machine manufacturing, and had become industrial nations. The other three, although they had not become thoroughly industrialized, had built many factories, railroads, and telegraphs, and were beginning to use machines for manufacturing and for agriculture.

The people of these countries were alike in many ways — in the way they worked and played, and in the way they thought and felt about things. In England, for example, there were miners engaged in digging coal and in smelting iron. In France and in Germany too there were other hundreds of thousands of men digging iron and coal from the earth.

In each of these countries millions of other people were engaged in the production of food, daily going out to their little plots of ground and carefully cultivating their crops. Frenchmen, Englishmen, Germans, and Italians thought about the same sort of things — the weather, their crops, their children, or what they could do on the next holiday.

Most of these people were chiefly interested in getting enough money to buy food and clothing for their families, and most of them were content if they had a holiday now and then on which to celebrate. They were not especially concerned with the building of the British Empire, nor particularly excited about France's desire to regain Alsace-Lorraine, nor especially keen about Germany's growing control of trade. Most of the people were interested in steady jobs, in good wages, in vacations, and in good homes.

Although these countries were ruled by separate governments, they were bound together by transportation, communication, and trade. Some of the leading factories, railways, and coal and iron mines were owned by citizens of several different countries. Governments were national, but the ties of trade, of transportation, and of manufacturing were international.

Standards of living had been raised in the 100 years just before 1914. Scientific men had greatly improved the health of people by discovering ways of preventing and curing disease. Improved methods of farming had raised great quantities of food, so that the dangers of starvation and famine were reduced. Machines had made clothing for most of the people better and cheaper; houses were more comfortable, more substantial, and better protected against weather and fire; hours of work among laboring people were shorter, and their wages would buy more and better things.

But rivalries over trade and empire had caused governments to suspect and fear one another, until every nation was jealous of every other nation.

After 1900 the feeling became so intense between the diplomats of the various countries that almost any incident might be enough to cause the countries to go to war.

On a summer day of 1914 that incident occurred.

On June 28 the Austrian Archduke Franz Ferdinand, the heir to the Austro-Hungarian throne, and his wife were shot to death by persons believed to be of Serbian nationality. The event took place at Sarajevo in Bosnia, then a province of the Austro-Hungarian Empire.

The spark had been ignited that was to set off the world explosion.

For a month the statesmen of leading countries tried to prevent war, but the task was too great for them.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

For references consult the list of books at the close of Chapter XIII.

CHAPTER XV

HOW THE WORLD WAR CHANGED EUROPEAN COUNTRIES

GERMANY DECLARES WAR ON RUSSIA; FRANCE MOBILIZES; ENGLAND MAY DECIDE TODAY TO SUPPORT HER ALLIES; ITALY TO REMAIN NEUTRAL; MAY DESERT TRIPLE ALLIANCE[1]

On the morning of August 2, 1914, the western world awoke and turned as usual to its morning newspaper. There across the front page in great headlines was the terrifying news that the nations of Germany and Russia were at one another's throats. By August 6 France, Great Britain, Belgium, and Austria-Hungary had entered the war.

Throughout Russia 1,000,000 men were mobilizing. Serbia and the other Balkan countries were full of marching regiments. In Germany and in Austria-Hungary, her ally, the governments had taken command of trains and every other kind of conveyance which could help to move 1,000,000 soldiers to the French frontier on the west and the Russian on the east. In France clerks in stores, merchants, mechanics in factories, young men in universities and colleges, farmers — all dropped their work to don uniforms, shoulder guns, and start for the north or east of France.

Nearly the entire civilian population of young, able-bodied men was plunged into war at the bidding of the military leaders of Europe. Within a week cities, villages, and towns of Europe were stripped of most of their male population. The strongest and the best men of every country had gone to join one or another of the armies massing along more than 1000 miles of frontier.

On August 2 a German army gathered with amazing suddenness on the western frontier to strike the first blow. On August 4 it marched into Belgium. The little Belgian army, hastily called into action, was brushed aside by the powerful German divisions, and Belgium was helpless before the avalanche of German machine guns, massive artillery, and swift cavalry. On swept the gray-clad horde through Belgium and across the French frontier. North of Paris the army of France rushed to meet and stay the German advance. For a few days it looked to the outside world as though Germany's success of 1871 was to be repeated, and that Paris must surely be taken and the war ended as quickly as it had begun.

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[1] *New York Sun*, August 2, 1914.

The plight of France was desperate. Every vehicle — automobile, motor truck, horse-drawn wagon, freight and passenger train — carried reserve soldiers into the path of the German army. In the emergency England sent hundreds of thousands of troops across the English Channel to help the French. This new reënforcement was rushed to the battle front in the shortest possible time.

The English troops and French reserves arrived just in time. The Germans were halted and held at bay less than 40 miles from Paris. Then the armies dug themselves into a long line of trenches in France, extending from the English Channel to the Swiss and Italian borders.

In the meantime on the eastern frontier the Russian troops, numbering millions, had marched part way across Poland and had invaded Germany and Austria. To meet the advance of this Russian army millions of German and Austrian soldiers were massed together. After the first rapid movement back and forth as sharp battles took place, these huge eastern armies likewise dug themselves into another 1000-mile line of trenches, dugouts, and forts.

On the sea England was proving that she was still mistress. Her tremendous navy drove almost every German battleship from the high seas as she threw a tight blockade around the ports of her enemies. German merchant vessels which had plied in and out of harbors on the North Sea were pounced upon and captured by British naval vessels; the German Baltic fleet was bottled up; and then the captive merchant vessels were made to serve England, France, and their allies.

Food and materials from every distant land across the seas were barred out of Germany. From Sweden and Norway alone could Germany still get food and raw materials. On land she and her allies were surrounded by enemies. They were compelled to depend upon their own farms. They also had to make their own guns, ammunition, and other war materials; but this was not so serious a blow, for Germany had huge amounts of coal and iron in her mines, and early in the war her armies had seized much of the French iron district near Lorraine. German factories were prepared to keep running through a long struggle.

Germany's enemies, Great Britain and France, also were well prepared to make materials of war. Great Britain had coal, a world empire, and a vast merchant fleet. France had iron, some coal, and enough farms to feed her people. Furthermore, with the German power checked on the seas, Great Britain and her allies were able to buy food from America, Australia, Asia, and Africa. This saved the Allied soldiers and civilians from starvation.

How the war upset the life of Europe

A densely massed line of troops was fighting on practically every mile of border surrounding Germany and Austria-Hungary, cutting these countries off from every means of transportation which formerly had crossed their borders freely.

You remember that Germany had been the land center of European trade. Millions of tons of goods had flowed back and forth, in and out of Germany. How complete and terrifying a change had occurred as trains, river boats, wagons, or motor vehicles, with their great stores of food and goods, were all strictly barred from crossing.

Within the warring countries the life of the mass of the people had changed entirely. Gone were husbands, fathers, and brothers. Occupations had changed. Machine shops were made to produce guns, ammunition, caterpillar tractors, tanks, or machines for turning out engines of war. Factories which had been engaged in manufacturing luxuries began to make only necessities or else ceased to run. Chemical plants which had been making things to enrich the soil or to improve manufacturing experimented with destructive gases, poisons, and explosives. People who were not actually fighting were busy at home carrying on the war by helping in every kind of war industry.

The governments of Europe made use of every person and every thing that could help to feed, clothe, and arm the fighters. Women and children carried on much of the work of every country in ammunition factories, in textile mills, and on the farms. Women became railway employees, bus-drivers, factory mechanics, truck-drivers, replacing the men as workers in industry.

Nearly all the peace-time activities were paralyzed. Passenger travel on trains or on steamboats almost ceased. In the towns and villages almost every form of amusement ceased. The thoughts of the people were of war, war, war!

When the fighting started in August, 1914, few people in the world had any idea that it would develop into a long struggle. Still less did they imagine that most of the countries of the world would become involved. Actually it dragged on for four years and three months — from August, 1914, to November 11, 1918.

At the beginning, you remember, Germany, Austria-Hungary, and Italy were allied against Russia, France, and Great Britain. Italy withdrew from the Triple Alliance (p. 360) at the outset, and shortly afterwards she linked forces with the other side. Turkey joined the side of Germany and Austria-Hungary. One by one the other important countries of Europe came in against Germany, Austria-Hungary, and Turkey; then the smaller nations entered; and even far-off Japan and China became involved. It was truly a World War, for before it was concluded people from every continent were fighting on one side or the other.

In March, 1917, came the Russian Revolution

The war had been going on for almost three years with neither side gaining much, when England and France lost their Russian ally on the east. A great revolution swept over Russia in March, 1917, and the Russian soldiers left their posts.

The revolutionary spirit had been smoldering among the Russian peasants and townsmen for many years. As you know, the peasants had suffered for a long time under cruel landlords; and although they had been freed from serfdom more than 50 years before the World War began, their condition was still little better than that of slaves.

Steadily through the late 1800's the spirit of rebellion had grown. The townspeople who were workers in factories and stores were the active organizers of the revolt. Then from the towns and cities it spread slowly through the villages as the leaders went out into the country to urge the peasants to rise.

Before 1900 there had been several revolts, in one of which a ruler of Russia had been killed. But these first revolts were crushed; many people were put to death, and others were exiled as prisoners to the mines of Siberia. The leaders of the people saw that they were not yet strong enough to set up their own government as Americans and Frenchmen had done a century before.

Between 1905 and 1914 the feeling of rebellion became more widespread. The Czar's government had given the people permission to elect a representative body of legislators, called the Duma. However, since this body was to have only very restricted powers and only certain classes of the people were allowed to vote, the people were not content with this arrangement. They wanted more power, and they asked for it. Such drastic demands did not please the Czar and his government, and a new Duma was elected. Each time it asked that it be granted such rights as belong to a congress or to a parliament, and each time the request was refused. Thus the spirit of discontent was kept smoldering, only awaiting a spark to start up the fires of revolt again.

Then in 1914 came the World War. The Russian peasant soldiers were forced to fight against the superior artillery and the rifles and machine guns of the German soldiers, without enough food, guns, or clothing. Railways were few, roads were bad, and it was almost impossible to keep the huge armies properly fed and equipped. This meant intense suffering for the huge armies of Russia.

For three years half-hearted Russian soldiers fought on without proper supplies. Most of them did not know for whom or against whom they were fighting, or why. Many of them did not wish to fight. What was empire or power to these Russian peasants? They wanted to go home and raise their crops and see their wives and children.

In the meantime the leaders of the working people in the cities were urging the masses to rebel and to take control of the government. The Czar and his generals were engaged night and day in trying to solve the problems of directing the armies and providing adequate food supplies for the soldiers. This was the people's chance, said the leaders of rebellion: while the Czar and his officials were busy with the problems of war the masses could revolt.

Finally in March, 1917, the Czar abdicated his throne in favor of his brother. The latter, however, refused to accept it until asked to do so by the new assembly; but the assembly was tired of emperors, and on March 16, 1917, formed a new kind of government. The old officials were dismissed. The spy and police system was abolished. Petrograd, as St. Petersburg was now called, and other cities became centers of life once more.

In July, Alexander Kerenski was chosen prime minister and also minister of war, and as the head of a liberal group he ruled Russia for four months.

There was another group of radical leaders in Russia, called Bolsheviks, whose leaders were Lenin and Trotski. At the time of the fall of the Czar's government Lenin was in exile in Switzerland and Trotski in Canada. With the fall of the government, however, these men and their friends in other neutral countries came quickly back to Russia. In November, 1917, they seized control of the government.

One of their first steps was to make a separate peace with Germany and Austria. An armistice was agreed upon in December, 1917, and a treaty signed the following March. Small, scattered armies of Russians continued to fight against Germany during the next year, but most of the Russian soldiers left the front and went home.

This event had one important result: it enabled Germany and Austria-Hungary to mass most of their troops on the western front against France and England and their allies.

THE UNITED STATES ENTERS THE WAR

When the war began the United States, following President Wilson's proclamation, attempted to keep a strict neutrality. This was very difficult to do. First, many Americans and people living in America had relatives in the warring countries. As you have already learned, there were millions of Germans, Austrians, Italians, Russians, and other Europeans in America. Naturally many of them took sides with their native lands.

There was another reason why it was difficult to stay out of the war. Citizens of the United States continued to trade with England and France but were prevented by the British blockade from selling food and supplies to Germany. This was bound to cause trouble sooner or later. Germany protested strongly against America's trading with her enemies and not with her. She tried to defeat Great Britain's blockade by sinking merchant ships as well as naval vessels with her submarines. The sinking of merchant vessels had been forbidden under international law, and the sinking of American merchant vessels caused intense feeling in the United States against Germany.

In May, 1915, a German submarine sank a British passenger steamship, the *Lusitania,* and many American citizens were among those drowned. This event, followed by others, made more intense the feeling of Americans against Germany.

In the winter of 1917, about the time that German officials were found to be trying to stir up trouble between the United States and Mexico, the submarine war, which had previously been stopped, was renewed. Finally on April 6, 1917, the United States declared war against Germany.

The United States had not been engaged in a great war since the War between the States in 1861–1865. Congress immediately passed laws drafting into the army or navy all able-bodied men between the ages of 21 and 31 (later the age limits were extended to include all men between 18 and 45). Nearly 2,000,000 soldiers were trained and sent to Europe. More than that number were trained and held here in reserve.

Billions of dollars were raised by Liberty Loans. It was estimated that there were 4,500,000 subscribers to the first Liberty Loan and more than 21,000,000 to the fourth loan. Huge quantities of food and munitions were transported to Europe to help the countries which the United States now considered her allies, as the whole country left its peace-time occupations and plunged into the war.

Through Four Years of War All the Principal Contestants became Exhausted

Month after month, year after year, as the war dragged on, the resources of the fighting nations were slowly exhausted. Day after day, for more than four years, millions of dollars' worth of steel and other expensive materials were being blown to bits. Huge amounts of coal were being used to propel trains and to run factories, so that the great destruction might go on. Billions of dollars' worth of rich farm lands and of property in towns and cities were raked by shells, torn by the big guns, and pitted with air bombs. Buildings that had stood since the Middle Ages were shattered.

Locomotives, motor trucks, engines, and machines were breaking down constantly, for mechanics could not be spared from the business of war to keep them in repair. As fresh supplies of people were constantly needed on the battle fronts, men left the munition factories, mines, mills, and farms to fill this demand. Food became more and more scarce. Even in the United States foods were conserved with the utmost care: sugar was carefully rationed in small amounts to people in homes, restaurants, and hotels, and wheat flour could be had only in limited amounts. Your mother can tell you that it was often impossible to buy more than a pound of sugar at a time. Why? Because the United States was shipping millions of tons of food—wheat, corn, and other grains, sugar, potatoes, and meats — to England and France.

On November 11, 1918, people in every part of the world went wild with joy! The news had come that an armistice was signed. The war was over. Germany and her allies had surrendered. France, England, and their allies had won.

Almost immediately the government of every country which took part in the war was faced with the problem of returning to the ways of peace. For four years the entire energies and thoughts of every person had been concentrated on war. Suddenly peace had come. Can you imagine the gigantic problems which faced every country?

In the first place, about 49,000,000 soldiers had to be considered. As soon as possible they must be returned to their homes.

They must have work at once in order to support themselves and their families. In a few weeks' time great divisions of soldiers left the trenches and went home to city, town, village, or farm. The men who owned farms that had not been destroyed were fortunate indeed, for they could go back and begin profitable work at once.

In the industrial nations, however, less than half the men were farmers. The others, a huge number, had to find places in mines, stores, schools, factories, railway and steamship companies — in every kind of peace-time occupation that could be reorganized. There was trouble and tragedy and confusion. Some of the companies for which men had worked in pre-war days had become bankrupt and were no longer doing business; many of the industries had turned to the manufacture of war machines and had to be completely remade. It required time to make these changes. While they were going on, millions of men who had endured endless misery in the trenches waited, out of work.

The years between 1918 and 1925 were almost unbelievably terrible years for Europeans, as the wounded nations slowly recovered and gathered strength.

Cost of the War

1. Twenty million lives lost

The war had been won by the Allied armies. But what a horrible price the victorious as well as the conquered nations paid!

The most shocking result was the wiping out of millions of human beings. Many estimates have been made of the number of people killed directly as a result of the war. No absolutely reliable figures are available. Most historians agree, however, that no less than 20,000,000 lives were lost. Imagine such a number! That is as much as half the population of Great Britain or France. That is almost as many people as there are in the thirteen largest cities of the United States.

Fifteen countries in Europe had men bearing arms. During the four years nearly 59,200,000 men had been trained, equipped, and made ready to fight. Russia alone had 12,000,000 soldiers; Germany, 1/45 the size of Russia, had 11,000,000; Austria-Hungary had 6,500,000; the British Empire had 7,500,000;

France had an equal number; and Italy had 5,500,000. The United States, which did not enter the war until 1917, had 4,300,000 soldiers. Other countries — Japan, Belgium, Turkey, etc. — brought the number up to 59,200,000. Of these nearly 10,000,000 — about one out of every six — were killed in battle. About 10,000,000 other people died of disease and starvation, or were killed in the destruction of cities and towns. In all history there has never been a war that could compare with the World War in the wanton destruction of human life.

2. The cost not less than $186,000,000,000

Although the toll of human lives taken by the great war was unbelievably terrible, it was not the only loss. The loss in property also was shocking. The United States War Department made a very careful estimate of the losses to the warring nations due to destruction of property, the upkeep and equipment of armies, and war debts. The total was no less than $186,000,000,000. Millions of lives and billions of dollars thrown away — and for what?

A continent had been smashed in four years spent in destruction. Europe crashed, and the whole world was affected to some extent by her fall. A time of comparative peace and well-being had given way to unchecked hate. Frenchmen and Englishmen united in hatred to kill Germans and Austrians. Germans and Austrians hated Englishmen, Frenchmen, Italians, and Russians — almost the whole world. Nearly everybody hated somebody else. Even Americans who had never borne any grudges toward European nations were taught to hate Germans, Austrians, and Turks.

Examples of destruction

Can you imagine a sixteenth of our own country laid waste? That is what happened to France. In the northern part of France, from the English Channel to the Lorraine iron district, 4000 villages were destroyed, 20,000 factories were blown up, 500,000 homes were ruined, and more than 7000 schools were either destroyed or closed by the time the armistice was signed.

Throughout the war district there were 8,000,000 acres of land filled with rubbish that had to be cleared away before farmers could work their land again; 4,000,000 acres had to be cleared of barbed wire, shell splinters, and other débris; and nearly 300,000 acres had been so torn up that vegetation would probably never grow there again.

Unless you have gone through this region of France and have seen the results of such destruction, you can never really know what ruin the war brought. Great sections of prosperous cities were razed to the ground. Factories were blown to bits. Fruit trees were sawed down or shattered by shot. The soil was riddled by explosives shot from big guns, poisoned with chemicals, and studded with unexploded shells.

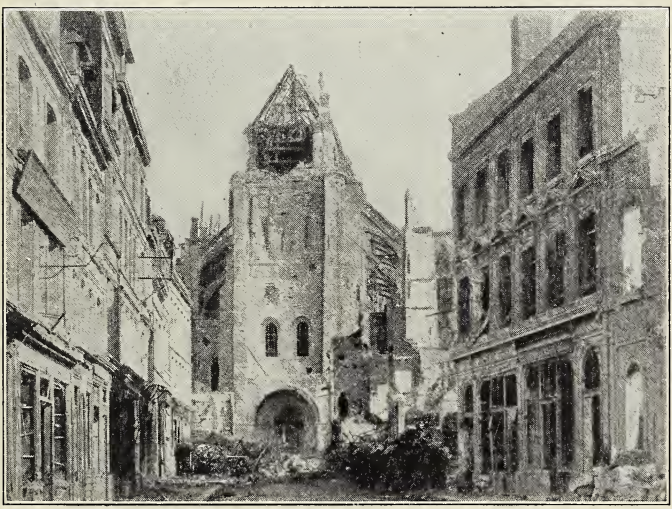


Fig. 157. Many cathedrals like that shown in the illustration, some of which had taken centuries to build, were ruined by explosions from the big guns during the World War. The homes of many city dwellers were destroyed, and the people were obliged to flee for their lives

The few houses left standing were sorry sights. Their roofs had been blown off, and their floors had caved in. Furniture and household equipment had been carried off. Articles that had been treasured by French families through many generations were gone.

This was the condition on the western front — in France. On the eastern front the same events had occurred on the soil of Poland. The same destruction and ruin were everywhere. Russian, Austrian, and German armies had tramped back and forth across the territory, ruining farms, burning villages, and driving before them hundreds of thousands of homeless refugees — old men, women, and children. Along the roads the tired train of war victims straggled, carrying what few light belongings they could gather together hastily.

Other regions also were the scenes of destruction.

In Asia Minor there was a battle front where our allies fought the Turks. The entire Balkan Peninsula had also been swept into the struggle, and the losses in those regions were heavy. The boundary between Italy and Austria was another scene of destructive fighting.

3. The debts of the countries of Europe

You can imagine what tremendous sums of money were needed by every warring nation! Millions of soldiers had to be fed and clothed and provided with guns and ammunition. The governments had to pay them wages too, which, while pitifully small, were needed to help to support the families left behind. How could any government raise the money necessary to do this?

At first it was obtained by taxing the people. But even the heaviest taxes were only sufficient to pay for a few months of fighting. As the war went on money, like everything else in the fighting countries, gave out. France, Italy, and the smaller nations were forced to borrow. First, they went to Great Britain, for she was wealthier than they; but at last Great Britain reached the bottom of her purse.

Even before 1914, as you know from *An Introduction to American Civilization*, the United States had become a very wealthy country. Her farm lands were producing large crops; her territories contained great amounts of coal, oil, and other minerals; her people were numerous and industrious and had saved money. So the people of the United States were in a position to lend money to Great Britain, to France, and to their allied nations. Altogether, more than $20,000,000,000 was raised in this country and lent to these allies to carry on war.

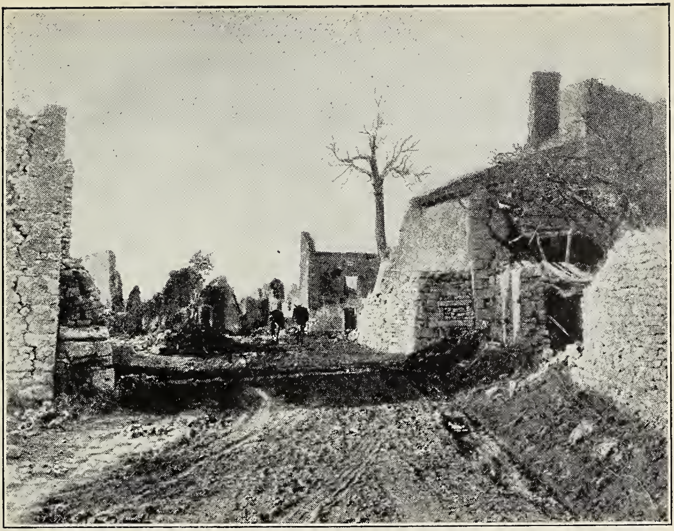
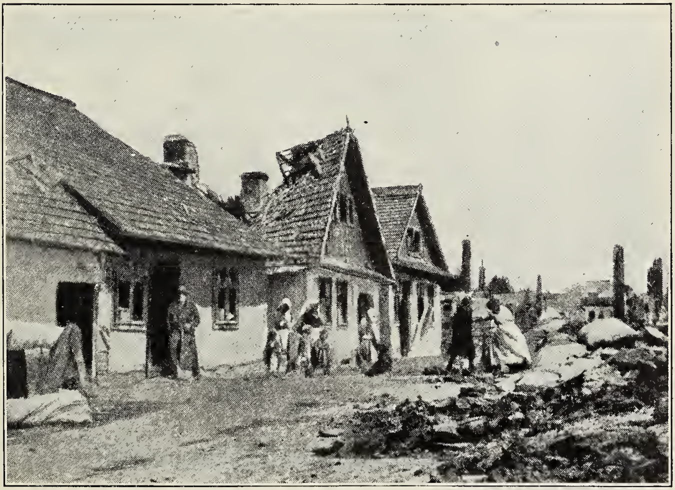


Fig. 158. This shows all that was left of the main street in a small French town at the end of the war



© International Film Service

Fig. 159. Sometimes during the World War armies had to destroy their own towns in order that food and other supplies might not fall into the hands of the enemy. The Polish town shown in the picture had to be so destroyed

In 1918 there was hardly a European country that had not sunk deeply into debt. France, Italy, and the smaller countries owed Great Britain huge sums of money, and finally they all owed money to the United States. At the close of the war it was estimated that England alone owed the United States $5,000,000,000.

Do you see what such a situation meant to the people of Europe? The money to pay these enormous debts had finally to be raised *from the people themselves.* In England, for example, people of moderate income still have to pay half of what they earn to the government in taxes. In the other countries also taxes are very heavy. Even in the United States the people have to pay income taxes, but these are very, very small when compared with those paid by European people today.

European Industries and Transportation broke down, and as a Result Millions of People were Unemployed

One of the worst results of the war was the human suffering caused by the breakdown of industry and trade throughout the leading countries of Europe.

On November 11, 1918, the joy of the world at the return of peace was marred by grief and mourning. The war had lasted so long that millions of people were on the verge of starvation in Belgium, Germany, Austria, Poland, Russia, the Balkan countries, and the Near East. Relief trains bringing food, clothing, and medical supplies were hurried to the peoples who had been liberated by the coming of peace.

The United States and other countries outside Europe sent quantities of food into the Near East, France, Great Britain, and Belgium, as well as into central and eastern Europe. Bread lines were formed in the streets of the towns and cities. Hungry mothers and their children, old men and old women — all weak from starvation — shuffled up to receive small amounts of food and warm clothing.

The work of restoring the industries of the stricken countries was even more discouraging than the work of bringing relief to the people. Coal mines had been flooded with water in some sections, factories had to be rebuilt, new machines were needed, and railways had to be repaired and newly equipped. All these peace tasks took money, and there was no money; so the United States helped Europe with money to rebuild her industries.

The coal mines of Great Britain illustrate how one industry had suffered. In 1913 Great Britain produced 292,000,000 tons of coal. In 1921 she produced only 163,000,000 tons, a little more than half as much. In 1913 she exported 77,000,000 tons of coal and coke; in 1921 only 26,000,000 tons were exported.

All these statistics of the war, although they seem distant and unreal to us, meant intense human suffering, even starvation. In Great Britain, France, Germany, and other European countries thousands of coal-miners were out of work.

The use of iron in Great Britain, France, and Germany showed the same decline. In 1913 Great Britain imported over 7,000,000 tons of iron ore for her steel mills. In 1921 the mills were able to use less than 2,000,000 tons. Can you imagine what a difference as great as that means in terms of steel mills closed and men walking the streets jobless and hungry, worrying about their family's support?

Here is a table which shows how German exports dropped between 1913 and 1923. These figures tell a story of ruined businesses. Similar drops occurred in exports of other articles. In 1923, after five years of trying to recover from the war, Germany was selling less than about one half as many goods as in 1913.

DECLINE IN GERMAN TRADE, 1913–1923
EXPORTS IN DOLLARS

	1913	1923
Manufactured articles .	16,069,000	10,765,000
Foods	2,548,000	298,000

Of course suffering from the war was much greater in Europe than anywhere else in the world. Nevertheless the entire world felt the effect of that breakdown of European trade. When Europe could no longer mine coal and make steel and manufacture goods for export, she could not exchange her products with her old customers for food and raw materials. The number of ships going from England to the world ports dwindled each year as the war went on. Farmers who raised wheat in other countries, and who needed manufactured goods, suffered through the crippling of this trade. The business of cotton-growers in Egypt and India came almost to a standstill. Trading all over the world was upset by Europe's war.

What happened to the Cities of Europe at the Close of the War?

The suffering on the farms of Europe was great, but in the cities it was very much worse. Most people on farms managed to produce enough food to keep alive, but in the cities people are forced to depend upon others for their food.

1. Vienna

Vienna, the capital of Austria, was probably stricken worse than other European cities, for during the war it had been completely shut off from trade with the outside world. There was little coal to burn, little wheat came from farms to make bread, and there was little money to buy raw materials. Men, women, and children were close to starvation.

Some of the young children of Vienna had never seen or tasted milk when the war closed. Great numbers of babies died. Many ragged children begged in the streets for food. All faces showed the mark of hunger. People were listless, dull-eyed, and downcast in a city that had been world-famed for its gay, well-fed crowds.

2. Moscow

Moscow had been one of the finest cities of Russia, but terrible changes occurred as food became very scarce. The peasants had left the fields to go to war, and there was so little food for sale that people finally poured out of the city into the country to find their own food. Along the roads leading from Moscow straggled processions of hungry refugees.

They could not leave Moscow by train, for there was no regular service. Often people had to wait two or three days for a train because the government was using all its means of transportation to carry troops to and from the front. Travel was anything but comfortable, for both the railway station and the cars were dreadfully dirty and neglected.

Many people who did succeed in finding their way to the country, however, remained there, and Moscow, which before the war had had a population of 2,000,000 people, shrank during those terrible years to less than 1,000,000 inhabitants. Starvation and disease combined with the war to cause this shrinkage.

3. In French and German cities

In 1920 a writer summed up the condition of the French cities by saying that the mind of the people was sick. Everyone was changed by the war. The men who had fought or suffered in the trenches had lost their old willingness to work and would not work at all if they were not offered very high wages. They were looking for pleasures to drown their memories.

Shortly after the war had ended, the food situation in Germany was one which would have seemed like the worst kind of hardship to well-fed Americans. It was so hard to get meat from the butcher shops that one had to have a ticket to obtain any; even then the shares were small, and the meat was poor.

Poultry and game could be had a little more easily — if one had enough money. But they were so expensive that only wealthy people could afford to buy.

The blockade of the coast by the Allies had reduced the supplies of fish sold in Germany; there was almost no butter, milk, or eggs; coffee and tea were very scarce; there was little fat or oil; — in fact, there was little of anything except potatoes, cabbages, beets, and turnips.

What Germany and her Allies had to pay the Victorious Countries

There is not space here to tell much about the treaty that was made at the close of the war. The exact amount of payments to be made by the defeated countries has never been definitely decided. But huge amounts of lands, raw materials, and goods, as well as money, were demanded as payment for the destruction due to the war. Germany lost part of her European empire and her lands in China. All her colonies in Africa were divided between France and England and she was left without her empire in foreign lands.

Two of these regions — Alsace-Lorraine and Upper Silesia (see figure 160) — were very valuable to Germany, for they were two of the richest iron and coal mining centers on the Continent. Lorraine had splendid iron mines and Upper Silesia had vast coal beds. Germany now had to depend chiefly upon the Ruhr fields for coal.

In addition to these losses of territory Germany was required to give large quantities of her own coal to France and other allied nations. She agreed to send them locomotives, cars, machinery, even live stock, and to pay for damage done (reparations) billions and billions of dollars.

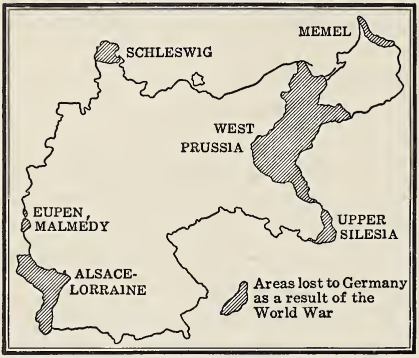


FIG. 160. The lands in Europe lost to Germany as a result of the World War are shown in the ruled areas in the map

Austria-Hungary also was divided and cut down to almost half her former size. Austria became a small independent country, and Hungary became another. Czechoslovakia, Poland, and Yugoslavia were new independent countries which were created out of parts of Austria-Hungary, Germany, and other territories. As a result of the war the boundaries of Turkey, the Balkan countries, and Syria, Irak, Palestine, and Persia in the Near East, were changed.

The illustrations which we have given are very brief, but they will show you how thoroughly life in Europe was upset by the World War.

In the meantime the trade of the United States increased greatly

How did the condition of Europe affect the United States?

You know from reading *An Introduction to American Civilization* that before 1914 the United States had developed a valuable trade all over the world. With the coming of the World War the increase in business and value of American farms, mines, factories, and banks was very great. The United States was placed in one of the most unusual positions ever occupied by any nation.

Remember that in 1914 most of the European countries were digging in for a life and death struggle. They could not even produce enough food for their own soldiers and for their workers at home, much less for export. Their factories were straining to the utmost to turn out implements of war.

American farmers, merchants, and manufacturers were called upon by Europe to provide food, raw materials, and manufactured goods. The workers of the United States responded, and the result was a tremendous increase in production such as had never before been known in modern times.

Note, in the table, the rapid rise in export from the United States one year after the World War began.

Number of Bushels of Foods exported by the United States

	1914	1915
Corn	9,380,000	48,786,000
Wheat . . .	92,393,000	259,643,000
Oats	1,860,000	96,810,000
Potatoes . . .	1,794,000	3,135,000
Rye	2,223,000	12,545,000

In the years 1917 and 1918 the United States is given credit for furnishing more than half of all the foods imported into Great Britain. Before the war the United States exported large amounts of coal, pig iron, and steel to Europe. During the war these amounts exported increased enormously.

Value of Exports of United States to Europe

1914	$1,339,000,000
1915	$2,537,000,000
1916	$3,813,000,000
1917	$4,062,000,000
1918	$3,859,000,000

These figures are staggering, are they not? We can hardly imagine that one country was able to produce goods in such amounts for shipment to other countries. All these things were mined, grown, or manufactured here in the United States. But great as this amount of shipping was, it did not drain the country too severely, for the people of the United States were being fed and clothed sufficiently, and the United States was providing fuel and manufactured goods for its own people as well as for those of Europe.

Other countries, which had formerly traded with England, France, and Germany, now traded with the United States

The war had another very important effect upon the prosperity of the United States. The countries of South America, Africa, and Asia, which had been in the habit of trading with the industrial countries of Europe, found their trade crippled. Trade with Europe was out of the question; but people of the other continents still needed to buy and sell things; so naturally they turned to the United States as a powerful industrial nation.

Trade with Latin America grew rapidly, as Argentina, Brazil, and Chile bought from the United States between three and four times as many goods as in 1913.

The same story might be repeated regarding trade with China, Japan, and other Asiatic countries. Exports to these regions increased about five times from 1914 to 1920. Uncle Sam had become the greatest manufacturer, miner, and farmer of the world.

Total Value of United States Exports (in Millions of Dollars)	
1914	2,435
1915	2,838
1916	4,421
1917	6,412
1918	6,054
1919	8,059
1920	8,439

Before the war England and Germany had been the world's greatest trading nations. With the coming of the war the United States took their place for a time and has since been running them a close race. In 1920 it was estimated that the United States supplied about one third of the manufactured goods sold in world trade!

The United States was also forced by the war to become the banker of the world. Money flowed into American banks as it had flowed into English banks before 1914, and New York City became the greatest financial center in the world. In the four years of the war several thousand Americans became millionaires. American products were so urgently needed in other parts of the world that great profits were made by increased trade. People who had never saved a cent of money began to have bank accounts, to invest their savings in stocks and bonds, and to make more money. It was a time of unheard-of prosperity for America.

During the war American farmers also became very prosperous. Farm land increased in value many times. Farmers planted larger crops than ever before, and they were able to sell immediately all that they could raise.

So it was that the United States became the creditor of the world, the banker of the world, and a great trader with the world.

Many European peoples believed that the United States became rich because of their misfortunes. This was not entirely true, however. The United States could scarcely keep from becoming prosperous. The people of Europe *had* to have food and supplies; the United States was the country best able to supply them, and the increase in industry, agriculture, and trade could not fail to enrich the country.

Now you can understand the Dangers in the Interdependence of Industrial Countries

All this terrible story of the war has shown you what comes when the friendly relations among countries dependent upon one another are destroyed.

Before 1914 Germany had been the pivot of European land trade as Great Britain had been the center of sea trade. All the countries of Europe depended upon one another for food, raw materials, fuel, and manufactured goods. There had been an uninterrupted flow of trade by rail, waterway, and road which had cut across all boundaries. War came, and the parts of Europe were separated from one another. Great suffering resulted not only during the four years of the war but for a long time afterwards.

Do you think it is true that

The more a nation becomes industrialized, the more it is affected by changes in other parts of the world, and the less it can live to itself?

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Book

Van Loon, Hendrik W. The Story of Mankind, pp. 456–465. Boni & Liveright, New York, 1921.

Magazine Articles

*"Cost of the World War in Blood and Gold," *Literary Digest*, November 12, 1921, pp. 18–19.

"France's Devastated Areas, Yesterday and Today," *Literary Digest*, February 11, 1922, pp. 38–39.

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"The Burden France has Borne," *National Geographic Magazine*, April, 1917, pp. 323–344.

"The Root of the Reparations Difficulty," *Literary Digest*, January 6, 1923, pp. 7–10.

"Vienna, the City of Starving Children," *Literary Digest*, July 10, 1920, pp. 56–58.

CHAPTER XVI

HOW EUROPE IS RECOVERING FROM THE WORLD WAR

ARE THE KEY INDUSTRIES OF EUROPE RUNNING SMOOTHLY AGAIN?

We have seen that for four long years, from 1914 to 1918, the key industries of Europe were badly upset. Mines and factories were closed, railroads were out of repair, roads were in a sorry condition, and international trade in central Europe had practically ceased. In 1918, when peace was declared, Europe was indeed a sick continent. How is it now, after more than a decade of peace?

1. The rebuilding of land and water transportation

After the peace treaty was signed, the first step was to rebuild the railways and roads, to start the telegraph and telephone systems again, and to send freight ships over the oceans, rivers, and canals.

Today, after more than a decade, what is the condition of the railways? Do the trains run on time? They do, indeed, in every western European country. As long ago as 1923 the author traveled 3000 miles by rail through nine countries.[1] Not once did any train arrive late at its journey's end. Express schedules today run "on the minute," as they did in 1913. The trains themselves are actually better than those of 1913.

These international railways carry freight as promptly and as safely as in 1913. Coal cars, oil-tank cars, refrigerator cars, cars containing every kind of manufactured goods, roll uninterruptedly across one country and into another, just as in the spring of 1914.

How about the roads of Europe? The roads too have been rebuilt. In 1927 the author drove an automobile over 2000 miles of highway in France, Belgium, Germany, Switzerland, Italy, and Austria. Throughout this distance less than 100 miles of road were unpaved. The highways, surfaced with cement or macadam, are as good as the national highways of the United States.

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[1] England, France, Belgium, Germany, Switzerland, Italy, Austria, Hungary, and Czechoslovakia.

The oceans, rivers, and canals are alive with traffic once more and just as busy as before the war. The Rhine, the Danube, and the smaller rivers within countries bear many barges, canal and river boats, tugs, and steamers whose decks and holds are piled with iron ore, coal, wheat, rye, cotton, and manufactured goods, much as in 1914. All the European countries are again exchanging their products as freely by water as by land.

Telegraph and telephone lines have been rebuilt. Excellent long-distance telephone service connects most of the larger cities of Europe to one another. Wireless telephone connects Europe to the United States and other parts of the world. Radio is in everyday use in western Europe. Germany even has a radio telephone on a certain train, over which the passengers may be connected with any other telephone in the country.

2. A still faster means of transportation — airways

All the European countries are keenly interested in air travel. Airplanes, hangars, and airports are being built in every country. It is becoming nearly as easy and natural to travel through the air as by rail, and airplanes and dirigibles have an advantage over railways in that they can fly over lands that the railway has not yet covered and do it much more swiftly than a train could travel. For example, the unbuilt section of the Berlin to Bagdad Railroad is covered by air service, and even vast stretches of Russia and Siberia are spanned by weekly airplane flights.

Europe has 146 established aërial routes, with planes flying on regular schedules. First among the regular routes is the London-to-Paris line, over which two companies, one English and one French, send three planes from each city every day. It is hard to believe that less than twenty-five years ago a Frenchman made the first successful airplane flight across the English Channel.

At the field of Le Bourget, near Paris, a loud-speaker announces the planes as they are about to take off for every European capital city. It reminds one very much of an American train-announcer in a large railroad station: "Paris to London," "Paris to Brussels," "Paris to Berlin," "Paris to Marseille."

The French Air Union has daily connection with England, Switzerland, Corsica, and Tunisia. It also carries passengers to connecting points for other lines, going to Prague, Vienna, Budapest, Belgrade, Bucharest, and Istanbul. German lines connect the important cities of Germany to one another and to the rest of Europe. The *Graf Zeppelin*, shown in figure 162, made a round-the-world trip without accident, proving that long-distance trips over the great oceans are possible.

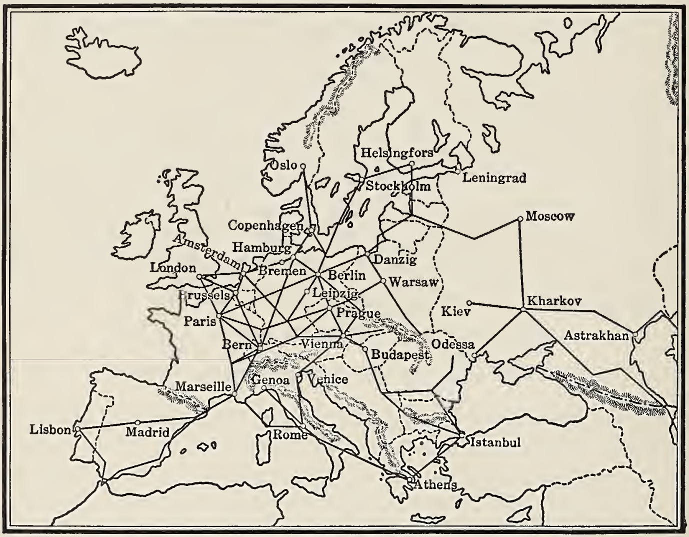
Oslo
Helsingfors
Stockholm
Leningrad
Moscow
Copenhagen
Hamburg
Amsterdam
London
Bremen
Berlin
Danzig
Warsaw
Brussels
Leipzig
Kharkov
Kiev
Paris
Prague
Astrakhan
Bern
Vienna
Odessa
Budapest
Marseille
Genoa
Venice
Lisbon
Madrid
Rome
Istanbul
Athens

FIG. 161. The principal airways of Europe today. Like the railroads, they do not end at political boundaries, but connect all the great cities of Europe

A German commercial aviation company, the Lufthansa, operating 90 regular lines, is the largest in the world. From the field of Tempelhof, Berlin, 36 German planes leave every 24 hours. In 1927 they carried more than 100,000 "flight guests," as the company calls its passengers. One can travel over these excellent air lines for about the same price as a first-class railway ticket, and it is possible to sleep and dine comfortably on the larger planes. The service of this great aviation company is nearly as safe as that of the German railways. During a recent year there were only two fatal crashes of Lufthansa planes.

This new mode of travel has become so popular that, during the warmer months, planes carrying from 8 to 27 passengers are filled daily, and seats must be reserved some time in advance.

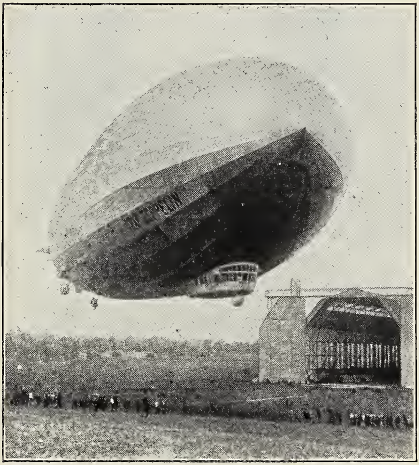

Fig. 162.` The German dirigible *Graf Zeppelin*. This airship, the largest in the world, was built especially for transatlantic traffic

The traffic is chiefly passenger and mail, but baggage and some freight are carried. Last year in the list of registered mail appeared one race horse, five prize pigs, any number of dogs, and some snakes bound for an American zoo.

Germany is first in aviation among the countries of Europe; France is second, Italy third, and England fourth. The United States is far behind in passenger service.

Great Britain's aviation has developed along colonial routes; for example, there is a weekly mail service between the homeland and India.

Russian airways cover about 7500 miles. They connect Tashkent with Kabul in Afghanistan; Verkhnii Udinsk in Siberia to Urga, capital of Mongolia; and Irkutsk with Yakutsk, 2700 miles across Siberia.

This brief review of European transportation leaves little doubt that on land, on water, and in the air the peoples of the Continent are in touch with one another again

3. The mining of coal and iron

During the four years of war, coal and iron ore were mined throughout Europe in enormous quantities. In the Ruhr valley in Germany, in the Lorraine district in France, and in England factories and steel furnaces ran furiously both day and night, but nearly everything that was produced was used for war and destruction.

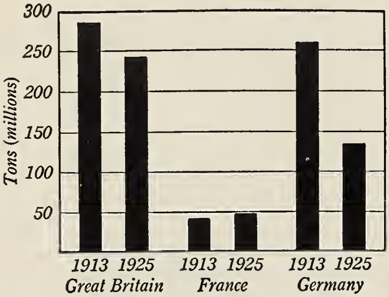

Fig. 163. Coal production for 1913 and 1925 in the three leading industrial countries of Europe

You remember that when the war closed, the mines, factories, and steel mills were sadly in need of repairs. It seemed as if years would be needed to bring them back to their pre-war state. Compare on figures 163 and 164 the production for coal and iron in the years 1913 and 1925.

4. Trade among the European countries

With the signing of the armistice, trade began again among the warring countries. No sooner were railways, waterways, and roadways repaired than goods began to be exchanged in small quantities at first. As the years passed, trade continued to increase. You can see that from the table, which shows German exports and imports in 1913 and 1927. At the close of the war Germany's trade had fallen to one third of its 1913 value. Even as late as 1923 there was little money with which to buy goods from other countries; but by 1927 factories were turning out goods of all kinds, and German merchants were selling more than before the war. This had taken place in spite of the fact that the population of Germany was smaller than in 1913 by several million people.

German Trade (in Millions of Dollars)

	Imports	Exports	Total
1913 . . .	2563	2403	4966
1927 . . .	3360	2428	5788

Great Britain and France were not able to accomplish so much as Germany, but they too were trading with the outside world more than in 1913. In 1927 Great Britain imported from all countries more than $5,000,000,000 worth of goods. She had imported about $3,000,000,000 worth in 1913.

So much, then, for a brief summary of the revival of transportation, manufacturing, and trade since the World War. We do not know, of course, whether their prosperity today is as great as it would have been had the war not occurred. All we can conclude is that at least they are recovering in production and in trade.

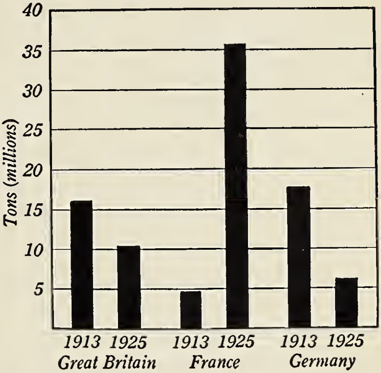

FIG. 164. Iron production for 1913 and 1925 in the three leading industrial countries of Europe. France's great increase in iron production is due to the iron mines which she received from Germany after the World War

INTERNATIONAL COÖPERATION HAS HELPED EUROPEANS TO REBUILD THEIR INDUSTRIES

European business men learned one very interesting and important lesson from the World War; namely, that if their governments were to be safe, and if their countries were to prosper in the future, they must *coöperate* with business men of other countries. In the past five years capitalists of many of the leading industries in Germany, France, Belgium, Great Britain, and the United States have formed great *international corporations*, called *cartels*.

There is now an international steel corporation with a capital of more than $250,000,000. Its name, translated into English, means *European Steel and Iron Cartel*. This corporation controls seven of the most important steel companies of Germany, Belgium, and France. In 1926 half the raw steel made in Germany was under the control of the European Steel and Iron Cartel, and one fourth of the coal and almost half of the iron ore were produced under its management. The stock of this large corporation is owned by business men of Germany, Belgium, Luxemburg, Czechoslovakia, Hungary, and Poland.

Can you see what these great international corporations may do for industry in the future? What advantages do they offer? Why is it important that coal and iron ore be mined or controlled by one great company?

Let us consider the case of Germany and France. The coal and iron mines of these two countries lie fairly close together. Most of the best coal is in the *German* Ruhr valley and most of the iron is in the *French* Lorraine district. Before the war, as you know, Germany controlled both these regions, but as a result of the war she lost Lorraine to France. France then had greater supplies of iron than Germany, but Germany still controlled the coal deposits of the Ruhr.

Due to the division of these two interdependent minerals, both countries were more or less handicapped in their industries.

Germany, of course, was not able to control the French iron supply. France wanted the Ruhr coal and tried to get command of it in 1923 by invading the Ruhr valley. The attempt was unsuccessful, however; for although the French army occupied the valley, the German workers refused to go into the mines. France also tried by other means to get enough coal from Germany to run her factories. She demanded that Germany pay her large amounts of coal every year as reparations. But none of these plans was very satisfactory to either country.

Then the capitalists of Germany and France accomplished peacefully what war had failed to do. They worked out an agreement between the coal and iron owners of both countries, whereby the European Steel and Iron Cartel should use the coal of Germany and the iron of Lorraine in an international industry.

The European Steel and Iron Cartel brought many advantages to its stockholders. The business men of all the countries working together could secure fuel and materials for their needs and could agree on the amounts of manufactured goods to be made. Before the formation of the cartel the French, German, and Belgian steel companies raced one another to turn out goods. Each, in the attempt to secure as much trade as possible, often manufactured more goods than the customers needed. Then mills and factories had to be closed until the extra supply was taken care of.

The international corporations changed that. They studied to find out how much iron and steel would be needed in a year and then they assigned to every mill or factory a certain proportion to manufacture. If a factory produced more than the amount agreed upon, it had to pay a small tax. If it fell below this amount, it received some money to help to make up the loss.

More than twenty international corporations

The business men of Europe have applied the idea of cartels to many other industries besides iron and steel. In 1928 there were cartels in the following industries: potash, borax, white lead, calcium carbonate, zinc, ferromanganese, raw steel, steel rails, steel tubes, rayon (artificial silk), glue, aluminum, enamel wares, tanning extracts, copper, linoleum, quinine, plate glass, bottles, incandescent lamps, superphosphate, and activated carbon.

In the formation of these international corporations Germany has led the way. German business men belong to all but one; French business men belong to most of them; British capitalists have not joined to any great extent; neither have Americans. In fact, Americans have joined only two — copper and incandescent lamps.

Do you see how these cartels may mean a very important step toward continued peace in Europe?

Since Germany led in the formation of cartels, let us study more closely what has happened there.

I. The Recovery of Germany

We have said before that Germany and Austria were severely stricken during the war, yet Germany has made the most complete recovery of any country in Europe. A new Germany has sprung from the war ruin.

In the first place, even to the visitor who knew but little of the Germany of 1914 there are many surface differences. For example, the flag above the government buildings is not the old imperial eagle, but a new red, gold, and black banner. There is little of the pomp of the Kaiser's rule in Berlin. Germany no longer wears the signs of royalty, for royalty now occupies an unimportant place in the land. The gorgeous uniforms of the officers of 1914 have been replaced by the sober workaday clothing of democracy. The Kaiser's place is now held by a president, who has very little power in the new republic of eighteen states.

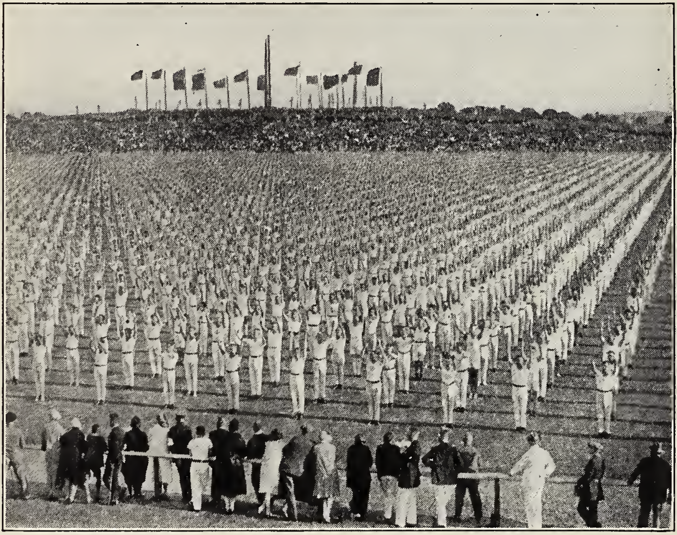

Fig. 165. Today Germany is turning more and more to athletics

But the changes have gone beneath the surface, as the visitor notices if he remains to study Germany. The very spirit of the country has changed. The pre-war students, who spent much time singing together and listening to music in restaurants, cared little for football, golf, tennis, or other outdoor games. Almost their only form of athletics was indoor exercises. Outdoors they had to do a great deal of marching and drilling, for every boy was trained to be a soldier.

But today the youth of Germany are more independent than their ancestors. Boys and girls are gayer and livelier. They play hard at athletics, they study hard, and they work hard.

Today German young men are entering eagerly into boxing, swimming, wrestling, track, golf, and tennis. They are lean, sturdy, healthy young athletes. While it is rather rare to see soldiers in uniform on the streets of the cities, it is not at all rare to see young people running relay races along the country roads.

The German girls of the old Germany were taught by their mothers all the domestic duties. They were told that their interests should center in their homes, their children, and their church. Today young girls in Germany have widened their interests. They enter athletic games as heartily as the boys. They even compete with their brothers. On field and track, in the water, behind the wheel of a motor car, even at football and hockey, these modern "fräuleins" are beginning to excel.

This spirit of youth has also extended to their elders. Young men, middle-aged men, even rather old men, of the larger cities have become keenly interested in physical training. Often all the men of the city gather on a wide, level field to exercise together. Germany is interested in keeping fit. This does not mean, however, that one of the chief pleasures of the German people — listening to music in open-air cafés — has disappeared, for that is still the most popular pastime of the nation.

Has agriculture changed in Germany?

In the other countries of Europe, when the empires gave way to a more republican form of government the peasants got the ownership of the land. This did not occur in Germany, however. In the eastern provinces the Junkers still own their large estates. In the southwestern sections the peasants still own their small farms.

There has been one important change, however. The younger sons and daughters of Germany are no longer contented with life in the rural districts. Farm labor is poorly paid, and the ambition of the farm youth is to pack up and go to the city to work in manufacturing and trade. More and more the Germans are turning from handicraft and agriculture to manufacturing, and Germany is beginning to be like England and the United States in this respect.

The movement away from the land is so great in Germany that the large estates of East Prussia now have to depend almost entirely upon the Poles for farm labor. These Polish peasants cross the border during the planting season and remain until after the harvest. The small farmers of Germany are still able to support themselves, however.

Germany is becoming more dependent upon the outside world for food than she was in 1914, although agricultural machines are coming rapidly into use and farming is being carried on even more scientifically than before the war. The soil is carefully studied and given the proper kinds of plant food. Swamp lands are being drained, so that as much soil as possible may be used to raise food for the German people by a decreasing number of farmers.

Fig. 166. There are fewer sheep farms like this in Germany today than there were before the war, because fewer of the German people are willing to remain on them

Furthermore, scientific agriculture has developed a new industry in Germany that is now employing thousands of people. This is the nitrate industry. Even before the World War German scientists had learned that two important fertilizers are needed to nourish the soil — potash and nitrate. Germany had the largest potash deposits in the world, but she had no nitrate deposits.

Until the World War, nitrates were imported from Chile, South

America, but during the war the British blockade cut off the nitrate supply. *So German scientists finally learned to make it from the air!* This was a very expensive process, however, and the manufacturers soon learned that they must use a cheaper fuel in this process than bituminous coal.

With this new demand for cheap fuel the development of lignite began. There are almost inexhaustible supplies of lignite in Germany lying near the surface of the ground. A way was discovered to prepare lignite so that it can be burned economically, and between 1913 and 1927 there came an astonishing increase in its production. In 1913 only 96,000,000 tons of lignite were mined; in 1927 the production had grown to 166,000,000.

As a result of these discoveries *Germany became the leading nitrate-producer of the world.* It now appears that because of the abundant supplies of fertilizer at her command and because of her use of machinery and scientific ways of farming, Germany will be able to keep up her agricultural production even though her people continue to leave the farms and to go into manufacturing. So both in farming and in industry Germany is rapidly recovering her important place in the world's industry and trade.

This revival of industry and agriculture in Germany has reduced the unemployment which immediately followed the war. Today nearly all the people are working and are being paid wages high enough so that they can live as comfortably as in 1913.

Ten years were required for this country to come back to the position it occupied before the war began. What that position would be today had the war not occurred we do not know, of course. But we must not forget that Germany owes France and her allies billions of dollars, and that to pay it her people will be very heavily taxed for many years to come.

In a recent arrangement (June, 1929) Germany has agreed to pay $27,000,000,000 — a part to be paid each year for 59 years.

II. The Recovery of France

How about France? Did she recover as quickly as Germany? The task which confronted the French people at the signing of the peace was as great as that confronting any other European nation.

Since much of the fighting took place in northern France, the whole industrial and agricultural life of this region had to be rebuilt.

Some of it had been accomplished even during the war. For example, some of the harbors, waterways, railways, and canals had been put in excellent condition by the allies of France in order to move troops and supplies. The British and American officers and soldiers who were in France helped to do this.

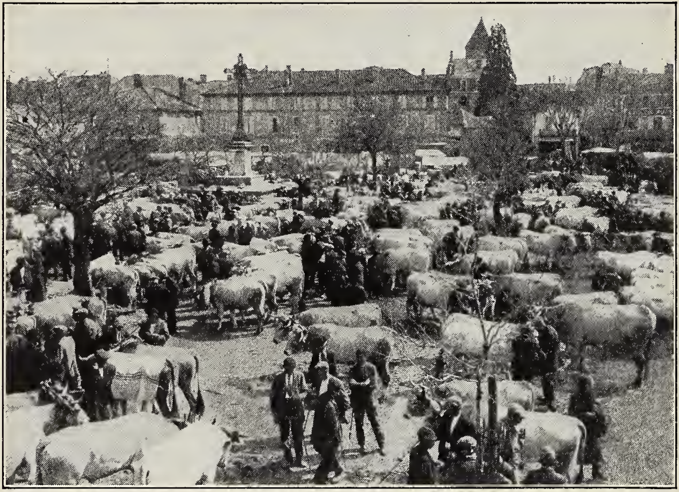

Fig. 167. Agriculture is recovering in France, as this picture of a French cattle fair shows. Most of the oxen are to be used to draw plows, and the farmers have come to buy

The schools of France have been rebuilt, and the young people are learning some new things which their parents were not taught. They are learning more scientific methods of manufacturing and trading, just as the German youth did before the war. They are studying the markets of the world, the kinds of goods people want to buy, and how manufactures may be made cheaply and efficiently.

The French people are learning how to burn the low-grade French coal, and they are using hydroelectric power on their railways. All these things will help French industry.

The French merchant marine too has grown from less than 1,600,000 tons to more than 3,000,000 tons today. More French ships are now carrying French goods than ever before, and the building of the French merchant marine is still growing.

We saw that in Germany the development of industry was drawing people away from the land. In France too this has happened, but to a much smaller extent. The percentage of people employed in agriculture in France has dropped to below 50 per cent.

In spite of this change in agriculture France is still able to feed her people almost unaided. The French peasant himself has not changed to any great extent. He still clings to his plot of ground with the same affection as before the war.

Thanks to the desire of most French peasants to farm, France has never had much unemployment. In this respect France is better off than either Germany or England. There was a period, during which the soldiers were returning to their homes and industry was going back to peace-time work, when there was much unemployment. But by 1925 the French business men needed many more workers in their factories than could be had. The government did not want to encourage the people to leave the rural districts; yet as the industries developed rapidly, the demand for men to run machines increased.

For the first time immigrants are settling in France

The problem was solved by immigration. Laborers flocked into France in greater numbers than into any other country except our own. There were more immigrants to France than to Canada, Australia, Brazil, or Argentina. In 1926 there were 2,500,000 foreigners working in French industries. Most of these were from neighboring countries, as you can see in the following list:

808,000 Italians
467,000 Spaniards
460,000 Belgians
310,000 Poles
142,000 Swiss
91,000 Russians
84,000 Britons
64,000 Germans
49,500 North Americans
39,600 Czechoslovakians

In 1925 alone 174,000 Italians settled in the southeastern corner of France, near the Italian border. The Belgians and Poles went chiefly into the industrial regions near Paris and on the northeast border, and into the Garonne River region. *One third of the coal-miners of France are now foreigners.* How does this fact compare with our own coal-mining sections? From 1921 to 1926 the population of France increased by 1,500,000 people, of whom 957,000 were foreigners and only 577,000 were French.

Thus, due to the sturdy French peasants who have continued to till the soil, to the foreign immigrants in industry, and to the use of new scientific methods, France is today in a fairly prosperous condition. Her industries are developing rapidly, and the country has partly realized her desire for security. France, like every other European country which entered the war, is still deeply in debt, however. The people are heavily taxed, and will be for many years to come.

III. Industry and Agriculture in Great Britain

Great Britain has not recovered from the war as rapidly as either France or Germany. Neither the industry nor the agriculture of the island kingdom is as prosperous as before the war. There are still over 1,000,000 unemployed people to be fed and clothed by the government. Many English people think that the poverty and suffering which have resulted from unemployment are calamities nearly as great as the destruction in the war zone of France.

The British people did not realize how seriously their industries had been injured by the war until the coal strike occurred in 1926. At that time there were 1,250,000 people working in the coal mines, most of whom were thrown out of work by the strike. In addition, the strike seriously affected another 1,250,000 textile workers.

The direct losses due to the coal strike were as great as might have been the cost of another war — $275,000,000 in loss of wages and $1,500,000,000 in loss of coal production. In 1913 coal made up 10 per cent of all the British exports; in 1929 it comprised only $6\frac{2}{3}$ per cent. The strike, therefore, meant a great loss to England, since for over a century coal had been her most important single resource.

In addition to her coal troubles Great Britain is not very hopeful about her iron and steel industry. She is rapidly exhausting her iron supplies and is now importing over 5,500,000 tons of iron ore a year. The United States, France, and Germany now lead Great Britain in steel-manufacturing, and the United States alone produces several times as much steel as Great Britain.

In agriculture Great Britain is no more fortunate. There has been little return of the British people to the land since the war, and the farms of Great Britain are quite unable to raise even a small part of the food needed by the British people. In fact, there is so little farming carried on in Great Britain that farm land is worth little. This has been the condition for many years, however, and is not the effect of the war alone.

The industrial condition of Great Britain is not entirely due to the war, any more than is the agricultural condition. Australia, Canada, and India have been growing more and more industrialized until they are now manufacturing many products for themselves which formerly they bought from Great Britain. Consequently many English factories are now closed, and more workers have been thrown out of employment.

In spite of the slow recovery of Great Britain's industry she is still holding her position in shipbuilding and in commerce. Even in the years immediately after the war, when the rest of the world was slowly recovering, British merchants were busily sailing the seas. English ships still carry the largest share of the world's goods, and England is still one of the two largest bankers of the world.

British people, like those of France and Germany, are very heavily taxed by the government. Great Britain owes the United States huge sums of money for the loans Americans made during the war and, like Germany and France, will be compelled to make large annual payments for many years to come.

So much for the recovery of the chief industrial countries — Germany, Great Britain, and France. Let us now turn to the great eastern power of Europe — Russia — and see what has happened to her since the war and the revolution of 1917.

IV. Russia since her Revolution

Today Russia, like Germany, presents a greatly changed appearance from that of 1914. Russia since the revolution is not at all like the old Czarist empire.

It is true that most of the farms present much the same appearance. The peasants in their blouses labor on the same strips of land. The same bony, undersized horses drag clumsy plows, which merely scratch the surface of the soil. The same houses in the same sprawling villages are sheltering the sons and daughters of the new Russia. Where, then, does the change lie? In what way is Russia different?

If you were to stop one of the plodding farmers, he might explain to you wherein his life has changed.

"Times are very hard," he would say. "We peasants toil long hours and earn little."

"But," you might protest, "I thought the revolution was to help the peasants to be freer and richer!"

"Yes, and we *are* freer, if not richer. In the old days I was yoked to the plow, like my horse here. Today I still work hard, but now my neighbors and I own much good land. We are not driven like horses any more. We have no master who forces us into the fields at daybreak. We are men now, not driven beasts. We work to feed ourselves, and work means bread. But it is our own land we are working."

If you went to a city, say Leningrad or Moscow, you would notice changes there too. Glance first at Leningrad. Even the name of the city has been changed. Leningrad, which before the war was known first as St. Petersburg and then as Petrograd, has now been named for Lenin.[1]

You stroll into a restaurant. In 1914 this was a club, the gathering place of the gayest and best-dressed people of Russia. In those days French was the language spoken by all the aristocrats of the club; Russian was considered the language of peasants. Gossip circulated rapidly in the club as everyone chatted of the opera, the ballet, the court, of his friends or his enemies.

Today the restaurant is filled with bearded peasants—people in blue shirts, high boots, sheepskin caps, and jackets. They are talking Russian.

If you went to the theaters, libraries, and museums, you would notice a vast difference in the people there too. The beautifully gowned and jeweled idlers of old Russia are gone. Peasants from the country and laborers from the factory go there to see, to learn, and to enjoy. They wear whatever rough clothes they happen to have.

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[1] Lenin was the name taken by the chief leader of the Russian revolution of 1917. His real name was Vladimir Ilich Ulianov.

These are only outward changes, which any traveler would notice. But there are many others. There are some which no one today fully understands, not even the Russians themselves. There are others which people who are interested can come to know. People all over the world have discussed Russia, and many opinions have been expressed. It is hard to learn even the simplest facts, but we shall try to tell you a few of these.

After the war and the revolution the Russian people were at first worse off than ever. They faced starvation in the years after 1917. There were several reasons for this, the most important being the breakdown of transportation and the terrible droughts that came in 1921.

Considering the number of her cities and her huge size, Russia had very few railroads indeed (see the map of Russia, figure 136). This was dangerous to the city dwellers, as you can see by imagining what would happen to city people in the United States if the trains should stop running. Where would the people get their food,— their milk, meat, and flour, — as well as their coal, wood, and other fuels? Those who did not have supplies stored in their homes would have to move out or starve.

Look at Moscow on the map of figure 136. Several large railroad lines enter Moscow like the spokes leading to the hub of a wheel. Look at Leningrad and notice its railroad connections.

During the war and the revolution the railways of Russia were seriously damaged. Many coal mines had stopped production; so there was little coal for the engines. Rail service stopped and did not quickly revive.

Mr. H. G. Wells, a famous English writer, was in Russia in 1920. He reported that Leningrad had shrunk from a city of 1,200,000 in 1917 to a little more than 700,000 in 1920. Think of the great metropolis of Russia, the capital of a huge nation, dwindling in three years to little more than half its earlier size. That is what happened to European cities when transportation broke down.

Then in 1921 came drought and famine

Even if there had been ways of bringing food to the cities, the supply would have been very scanty, for the richest, most fertile farming region of Russia was suffering from long dry spells called droughts. Along the Volga River no rain fell for weeks. The water which was usually stored in the ground was soon drunk up by the thirsty plants. Then the soil became very hard. It cracked open. The crops burned in the fields.

So the grain needed by the city people was not to be had, and the drought of 1921 caused one of the worst famines in Russian history. "The granary of Europe" was empty. Peasants fled from the fields and died by hundreds of thousands. There were 43,000,000 people who were affected; 13,000,000 of that number were on the verge of starvation.

Disease frequently follows on the heels of famine, and in 1921 Russia did not escape this additional misfortune. Diseases grew to the proportion of plagues, for there were few medicines to help the sick. Doctors were powerless to stop the epidemic among the people, most of whom were poor, living huddled together, many families in one dwelling. Crowded conditions, hunger, and dirt spread disease.

A sick Russia for the new government to revive

These were some of the troubles through which Russia went. In addition the World War, in which she fought for more than three years, cost her dearly in territory as well as in everything else. Russia lost more than 260,000 square miles of land with approximately 25,000,000 people who would no longer be Russian citizens. Thousands of miles of railway built by Russia ran through these territories, and many of her iron reserves were there. Russian coal production dropped very greatly, and this caused thousands of factories and mills to close. Poland, where a large proportion of Russia's mechanical industries were located, became an independent state. The Baltic port, for which she had fought for so long, was lost. Temporarily the valuable Ukraine and Siberia also were lost.

At the end of the years of war, revolution, and famine the suffering of Russia was so great that other nations of the world doubted if she would ever regain her former strength. But she, like Germany, is slowly recovering from her terrible experiences and seems to have taken on new life. New hope has come to the people. Let us see what has happened.

As a result of the revolution the Russian people control their land

The Russian people, in spite of their suffering, gained some things very dear to them through the revolution. Most important of these was the land. The peasants had always thought that the land should belong to those who worked it. At last they had what they wanted. Much of the land went to the peasants. The mir, with its committee of village elders, was still in existence, but the peasants were no longer compelled to depend upon the mir for their land. They did not have to accept and to work whatever land the mir assigned to them. Indeed, many left the mir and developed their own small holdings independently.

The peasants are now restoring and improving agriculture

During the war and the revolution it was impossible to get farm tools. If they broke, there was no way of replacing them. By the time peace came, therefore, agriculture was in a deplorable condition.

After the revolution the peasants were able to repair their tools and houses. One way in which they did this was to cut wood in the forests. Formerly two thirds of Russia's great forests belonged to the Czar and one third to private owners, none of whom permitted the peasants to cut wood. Now that the government controlled the forests, the peasants were allowed to use them.

Today peasant farms, the main source of Russia's wealth, are again producing grain. In a village near Vladimir, for example, in central Russia, where the soil is poor, each family before 1917 raised enough grain to keep itself in bread for five or six months of the year. Now among the 140 families there are but two which fail to grow enough grain for the whole year, and many have a surplus to sell. This village has a community plant to clean and select seed for planting. It also has a community water mill to grind the grain into flour.

New farming methods are being used

The new government of the Russian Republics is trying to improve farming by introducing scientific cattle-breeding and cultivation of the soil. The best of modern farm implements and machines are slowly being introduced. These are sometimes owned by the government and rented out to the farmers. In some regions several peasants who are eager to learn new methods of farming buy them together and share in their use.

A group of American farmers went to Russia recently, taking new tractors with them. Before 1914 the government had allowed machines to be introduced only under special arrangements, and during the war and the revolution it had been impossible to import machinery at all, so that the peasants had never had an opportunity to learn to use it, and agriculture had remained primitive.

The farmers came from distant villages to watch the Americans work. They saw the contrast between the old hand implements and the large gasoline tractor which pulled two seeding machines, throwing in the seed at the rate of 50 acres of seeded land a day. They saw clearly the saving in time and labor. So there are now thousands of farm tractors in Russia, and farm lectures and demonstrations are helping the peasants to improve their farms.

More goods are made now than before the war

One of the greatest problems of the Russian people has been the rebuilding of the old industries and the building of new factories, power plants, and mines.

First of all, the power industries had to be developed, for on them all other industries depended. Coal mines had to be opened and water-power (hydroelectric) stations built. All this is slowly taking place in several districts — at Moscow, at Leningrad, at Tiflis, and on the Don and Dneiper rivers.

Iron refineries and machine shops are likewise needed to furnish the tools with which manufactured goods are made. The new

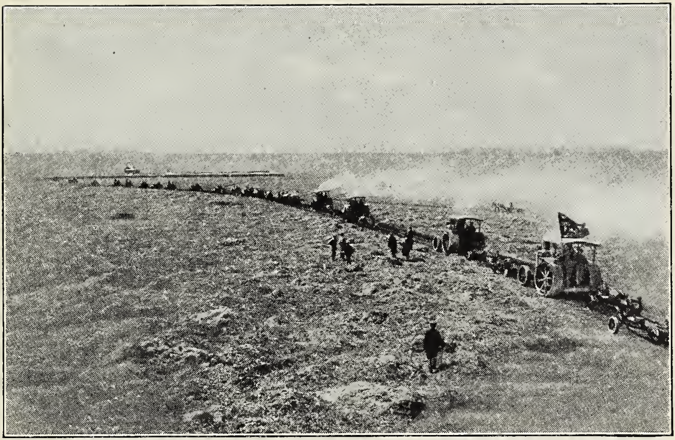

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Fig. 168. In some parts of Russia today thousands of acres of grain-producing land are being prepared by the use of tractors, which have taken the place of the old-fashioned plows. Many of these tractors belong to the community

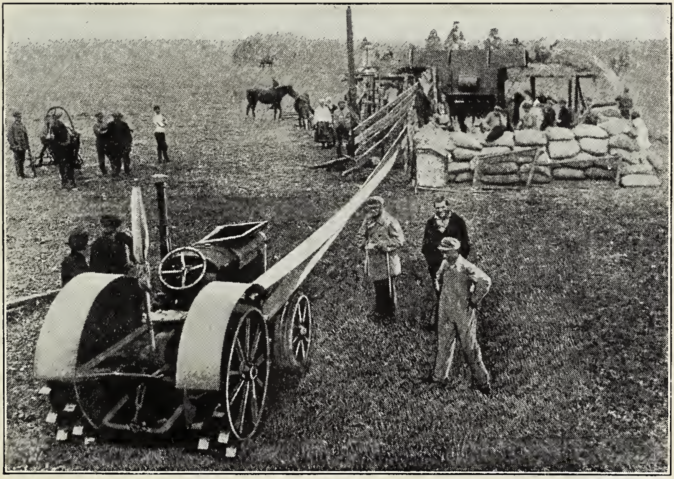

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Fig. 169. Today many gasoline-driven threshing machines in Russia, owned by the community, do the work which was done by human-muscle power before 1914

Russian government is trying to build up these industries on which other industries depend. Such growth cannot be an overnight affair, but it is reported that the present amount of manufactured goods surpasses the 1913 output. Moreover, it comprises more machinery and more necessities, and fewer comforts and fewer luxuries than the 1913 total.

The growth of coöperative organizations

Coöperation means working together, playing together, or sharing profits and losses together. The Russian peasants have nearly always coöperated — shared their tools and helped on one another's strips of land. The mir was a kind of large-scale coöperation that divided the land, decided on the crop to be sown, and arranged coöperatively for the sale of crops.

In the crafts workers often bought supplies jointly. The *artel,* or group of artisans working together, was a popular form of coöperation. Five or six shoemakers might decide to buy and work and sell together as partners. Sometimes there would be as many as eighteen or twenty workers in an artel.

Suppose you are living in a village where many of the peasants raise potatoes. You find it hard to sell them, for everyone raises enough for his own use. Far away, however, potatoes bring high prices. You and your neighbor join together to try to sell your surplus potatoes. A meeting is called at the town hall. A coöperative organization is formed, and a board of governors and a committee of accounts are elected. The committee is to keep an eye on the buying and selling and a careful account of the money paid by members. A fair membership due is charged to everyone in the coöperative, and every member has a vote.

There are many coöperative organizations in Russia, just as there are in the United States. One of these larger associations, consisting of smaller coöperatives, has charge, for example, of the growing of potatoes all over Russia. The All Russian Union of Cöoperative Societies for the Marketing and Treatment of Potatoes, as this association is called, can raise capital in Moscow to help the small coöperatives and has control of many industries connected with the raising of potatoes and the manufacturing of by-products.

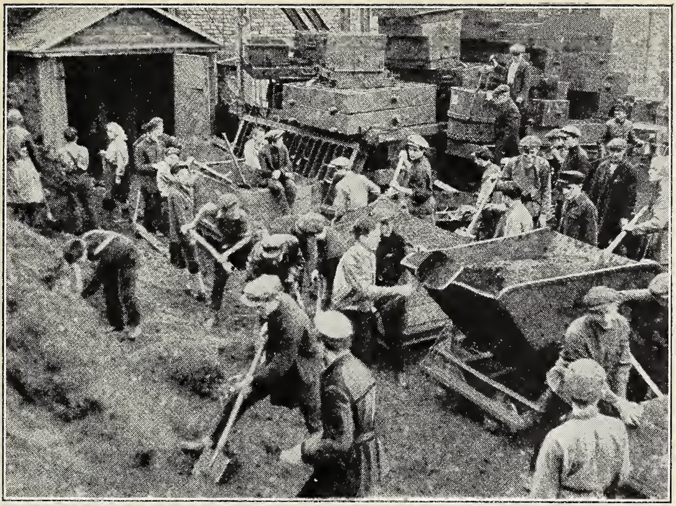
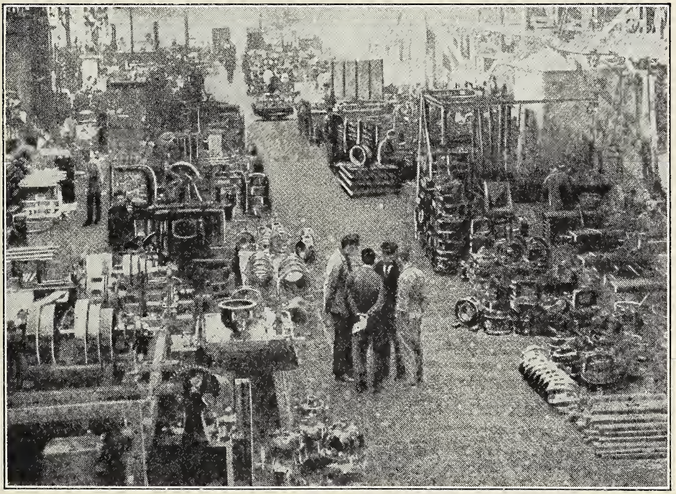


FIG. 170. The Russians today are using more mechanical power. So eager are they for it that some of them spend their free time helping to construct power plants



© Press Cliché

FIG. 171. This Russian factory makes electric motors. Not only is more gasoline power being used (see Figs. 168 and 169) but more electric power as well

Being a member of this all-Russian society, you feel sure that your potatoes will be sold at a profit. Instead of being a farmer with 80 bushels of potatoes which you cannot sell, you are a member of a great organization that knows all about potatoes, where they are wanted, and how they can be used.

The Russian people have developed this coöperative way of working and selling their crops and goods, and now much of their work is done in that way. In 1924 there were over 6,000,000 peasant members of large coöperatives besides many smaller groups.

The standard of living of workers in Russia is still very low

During the years immediately following the war and the revolution, city people and factory workers could get hardly enough to eat. They also had the greatest difficulty in getting clothing and small manufactured things. Their wages were often paid in articles of food and clothing rather than in money.

In 1921 a sample monthly allowance made to a worker in the Ural iron mills was

45 pounds rye flour
15 pounds meat
15 pounds buckwheat (or other cereal)
Small quantity of butter
Tea or coffee
Salt
Tobacco
Matches

By the end of 1927, however, the general level of wages was over twice as much as it had been in 1913, but the cost of food and clothing was also about twice as much. In general the standard of living today is about the same as in 1913. In this respect the recovery of Russia since the World War has about equaled that of Germany, France, and Great Britain.

Though wages are low, the Russian people have many advantages that they lacked before the revolution

There are other important things besides wages and costs to be considered in judging the standard of living of a people; schools, medical help, and amusements are among these. In Russia all these things are free to factory workers and peasants.

Since the revolution education has changed greatly. Under the Czarist rule most of the schools were private church schools. Most of the Russian children had no chance to go to school at all, and a vast proportion of the people grew up unable to read or write.

Today schools are being established in every village, and the children are required to attend. The work of the school is of a practical nature; for example, arithmetic problems are made up from everyday problems of the farm and the shop. Grown-ups as well as children go to the schools to learn. After the day's work is over, men and women go to the evening classes. Every boy who serves in the Russian army as a soldier must also learn to read and write. Before very long practically every man in Russia will know how to read and write.

Russia has long been famous for its dramatists, writers, artists, and musicians. Before 1913 only the wealthy could hear music or read books. Today museums, libraries, and concerts are attended by crowds of working people.

The new government is studying the communities and working out improvements for streets and houses. In the center of every village is a town hall, or community house, in which nearly every evening there is an entertainment — motion pictures, a play, a concert, or a lecture. The government circulates motion-picture films from village to village.

The Russian Republics have a government publishing plant which is the largest in the world. Books and pamphlets to the number of 40,000 were printed there in 1925. There are 32 government libraries throughout the country as well as many private collections and small village libraries.

In the days of the Czars only the aristocrats could afford medical help. Today it is provided in many places at free clinics for all who come there.

We must remember all these things when we think of the standard of living of the Russians. Do you think the Russian peasants are better off than they were before the revolution?

Some Summary Questions

This must complete our short study of Europe since the World War. Our review of the recovery of the warring countries has been very brief, but it has dealt with important matters. It has shown the extent to which people are working again. It has considered the running of the mines and factories and stores. It has shown the condition of transportation and trade.

Our study has dealt especially with the interdependence of the peoples. It has caused us to think of important questions. Are the people of industrial countries as dependent upon one another today as they were in 1914? Are they in as great danger today as they were in 1914? Have they taken any steps to avoid the dangers?

What is the general conclusion that you have reached? Are the countries of Europe recovering? How well off are they as compared to their condition in 1914? Is the standard of living of the people today as high as it would have been if there had been no World War?

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Book

*Bowman, Isaiah. The New World. World Book Company, Yonkers, New York, 1928. This book is the best single reference on conditions in Europe since the World War. It will appeal only to the rapid readers.

Magazine Articles

*"Looking down on Europe," *National Geographic Magazine*, March, 1925, pp. 261–326.

*"An Industrial Bird's-eye View of Europe," *Literary Digest*, September 4, 1926, pp. 68–70.

"The Battle Line of Languages in Western Europe," *National Geographic Magazine*, February, 1923, pp. 145–180.

"The Tragic Plight of Britain's Miners," *Literary Digest*, December 24, 1927, pp. 13–14.

*"The Big Stake in the British Strike," *Literary Digest*, May 15, 1926, pp. 5–8.

"Facing the Facts of Britain's Trade Anemia," *Literary Digest*, August 20, 1927, pp. 14–15.

"London, Rangoon, and Way Stations by Air," *Literary Digest*, April 25, 1925, pp. 58–65.

"The British prefer Airships," *Literary Digest*, January 15, 1927, pp. 16–17.
*"France's Post-war Prosperity," *Literary Digest*, December 29, 1928, p. 15.
"The Franco-German Trade Alliance," *Literary Digest*, October 2, 1926, p. 20.
*"Renascent Germany," *National Geographic Magazine*, December, 1928, pp. 639-717.
*"The New Germany, 1919–1929," *Survey Graphic*, February, 1929.
*"Soviet Russia Today," *Literary Digest*, November 25, 1922, pp. 14–16, 49–56.
*"Anarchism and Cruelty — the Soul of the Russian Peasant," *Literary Digest*, December 9, 1922, pp. 42–48.
"The Longest Regular Air-Line in the World," *Literary Digest*, March 13, 1926, pp. 63–67. Russia.

INTERNATIONAL COÖPERATION

*"The League of Nations, What it Means and Why it Must Be," *National Geographic Magazine*, January, 1919, pp. 43–66.
*"The New European Steel Trust," *Literary Digest*, October 16, 1926, pp. 12–13.
"Visions of Pan-Europe," *Literary Digest*, November 7, 1925, pp. 18–19.

INTERNATIONAL COMPETITION

*"The Navies of the World — Today and Tomorrow," *Literary Digest*, November 12, 1921, pp. 12–13.
*"Six Million Men under Arms Today," *Literary Digest*, November 12, 1921, pp. 14–15.
*"The World Race for Oil," *Literary Digest*, January 20, 1923, pp. 14–17.
"The New Partition of Africa," *Literary Digest*, May 14, 1921, pp. 12–13.
"The European Advance in Asia," *Literary Digest*, April 30, 1921, pp. 8–9.

UNIT IX

CHINA: A CHANGING AGRICULTURAL CIVILIZATION

CHINA: A CHANGING AGRICULTURAL CIVILIZATION

We must leave European countries and turn to the study of Asia — to a civilization very different from the ones we have been considering. We are turning to that region of the earth in which more than half of the people of the world are living — the region near China and Japan (see figure 1, chap. i).

We shall see now how people live who are little touched by engines, machines, and factories; trains, steamboats, and automobiles; telegraphs, telephones, and radio. We shall inquire how it happens that nearly 1,000,000,000 people are living in the modern world with few of these things. How do they get food, make clothing, and provide shelter without them? How do they work without them?

Already in this book (chap. v) we have studied about people who live in southern Asia — in India — and who form a third of Asia's great population. Most of them live a simple farming life. Now we shall consider the other two largest groups — the Chinese and the Japanese.

To understand life in Europe we considered four important factors. In studying China in the following unit and Japan in the next unit after that we shall seek answers to the same four questions that we asked about Great Britain, France, Germany, and Russia:

1. Are they located in a stimulating, productive climate?

2. Have they large amounts of fertile land and sufficient supplies of coal, oil, and water power, and of iron ore and other raw materials?

3. Have they large numbers of people ready to work?

4. Have they studied their problems in a scientific way, inventing engines, machines, and efficient means of transportation and communication and ways of doing business?

CHAPTER XVII

"THE UNCHANGING CHINESE," A PEOPLE WITH THOUSANDS OF YEARS OF HISTORY

What is your name?

Suppose it is James Grant or Helen Grant. If you lived in China your name would be Grant James or Grant Helen. Last names come first, and last names are very important, for they are *family* names. In China "family" means a great deal.

FAMILY LIFE IN CHINA

We in America think that three or four persons make a family. An American family of eight or ten is considered not only *large* today but *enormous*. Houses in American cities are not made to hold such large families. Mother and father, not more than two or three children, and occasionally a grandparent make up the average family.

In Chinese families there are usually many brothers and sisters. But a Chinese family does not consist of mother and father and children alone. When a Chinese son marries, he does not leave home and start housekeeping for himself. Instead, he brings his wife into the home of his father and adds her to the family group. Thus there will sometimes be four generations of people in the same home: great-grandparents, grandparents, parents, and children. Uncles, aunts, cousins, in fact all the people who have the same family name and who are related by blood ties, belong together.

The father who descends from the main branch of the family is head of all the family. He manages whatever land or other property the family owns. Money made by any member of the family is turned over to the family fund, which the family spends or distributes.

The older one grows, the more important he becomes in the Chinese family. The devotion of sons to their parents or grandparents is very great.

The extent of this Chinese reverence for their old people is shown by a request made by a man 1500 years ago. He was begging to be excused from appointment to a highly honored position as tutor to the crown prince.

> Out of pity for my orphaned condition my grandmother adopted me, and tended me with her own hands. I was very delicate at nine, still unable to walk. My family had come down; its fortunes were sadly diminished. I stood alone in the world, so forsaken, my body had to seek comfort from its own shadow.
>
> My grandmother was generally ill and confined to her bed, so that I had to wait on her and nurse her without ever being able to leave her.
>
> That I, so poor and unworthy, should have been honored with a call to the Eastern Palace is more than I can requite with my life. . . . Nevertheless I venture to hope that I may be permitted to follow the dictates of my private affections. . . .
>
> May the illustrious dynasty which rules the State according to the principles of filial piety look down on my lonely sorrow with compassionate indulgence.
>
> It is only because my grandmother is nearing the end of her days, and has scarcely any vitality left. Man's life is so short that in the morning he dare not count on the evening. Without my grandmother I should not have survived to the present day. Without me she would not have fulfilled the number of her years; indeed, we have preserved each other's life. Therefore, I am unable to leave her even for a moment, and dare not abandon her to her fate. Should she be vouchsafed the happiness of ending her days in peace, I vow that as long as I breathe I shall be ready to lay down my life and demonstrate my gratitude even unto death.
>
> Trembling with fear like a dog or a horse, I respectfully submit this my humble petition.[1]

The family includes not only the living members but all the dead members as well. When a Chinese father or mother dies, the name is written on a tablet. The dead one is remembered with respect and reverence by the living. Each clan, consisting of several families of the same surname, has an ancestral hall erected in memory of its ancestors. People do not live in these halls, but at regular intervals the living members of the clan, so far as possible, come together to do reverence here at the family shrines.

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[1] A. E. Grantham, *Pencil Speakings from Peking*, pp. 43–47. George Allen and Unwin Ltd., London, 1918.

The Chinese do not forget their ancestors. Hundreds of years after they are dead some of them are remembered and spoken of, and their wise sayings are quoted from generation to generation. Indeed, ancestors are remembered and spoken of as members of Chinese families today, though they lived in the days before the coming of Europeans to America, before the beginning of English history, or even before the founding of Rome.

Here in America people are proud to trace their ancestry back to the Revolutionary War, less than 160 years ago. And they are especially proud if their ancestry goes back to the time of the coming of the *Mayflower* in 1620. A few American people claim as ancestors Europeans of the days of William the Conqueror (1066).

But these "moderns" would be mere beginners in Chinese family history. Back to 1066, what is that? Less than a thousand years! Some Chinese families can tell you the names of each of their esteemed ancestors back to the days when Alfred the Great, or Emperor Charlemagne, or even Cæsar ruled in Europe. Some can go even further back — to the time of the Ptolemies of Egypt.

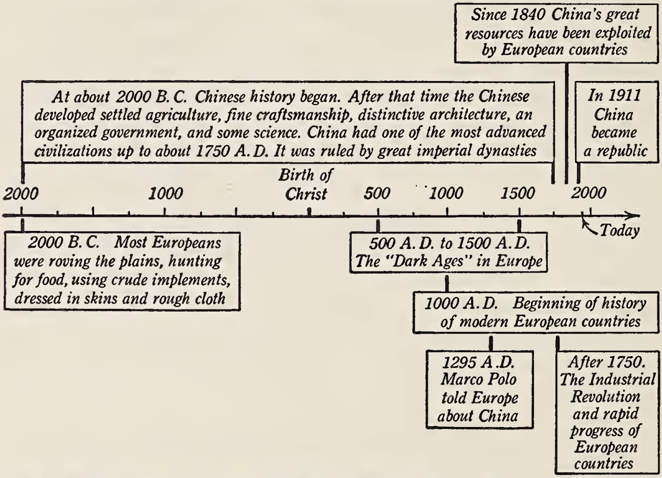
On a certain day every year the living members of a Chinese family go to the hills above the village and mark anew the graves of their ancestors, putting food and incense on them. They carry roast pigs to the burial grounds, present them to the ancestors, and have a feast in their honor. Thus do they remember the existence of their famous forefathers, who may have lived hundreds or even thousands of years ago.

Chinese History is Thousands of Years Old

The beginning of China lies far, far back — much further than the beginning of any other nation in the world today. There were nations in western Asia, Europe, and northern Africa when China was fairly young. Egypt, Assyria, Babylonia, Greece, and Rome each played its brilliant part. They grew large and prosperous, flourished for a time, and then disappeared. It was only through the ideas, inventions, and great works of art which they passed on to other peoples that their civilizations lived on.

How different has been the situation in China! The Chinese civilization is about as old as that of Egypt, but it has never ended. The Chinese can show an unbroken written record of history, extending all the way from the period of the first ruling family, more than 4000 years ago, to the present day.

More than 4000 years! Can any European country boast of such a long history? Look at the time line of figure 172. Compare the length of life of modern European nations with that of China. Notice that the time line showing Chinese recorded history is just about evenly divided at the point marked "birth of Christ." Modern European nations do not go back even so far as that in their history.



Since 1840 China's great resources have been exploited by European countries

At about 2000 B.C. Chinese history began. After that time the Chinese developed settled agriculture, fine craftsmanship, distinctive architecture, an organized government, and some science. China had one of the most advanced civilizations up to about 1750 A.D. It was ruled by great imperial dynasties

In 1911 China became a republic

2000 B.C. Most Europeans were roving the plains, hunting for food, using crude implements, dressed in skins and rough cloth

500 A.D. to 1500 A.D. The "Dark Ages" in Europe

1000 A.D. Beginning of history of modern European countries

1295 A.D. Marco Polo told Europe about China

After 1750. The Industrial Revolution and rapid progress of European countries

Fig. 172. Find the center of the time line. The birth of Christ marks the division of time as it is recorded in the Western world. Note China's long, unbroken history from 2000 B.C.

More remarkable than the length of time covered by Chinese history is the unchanging nature of the people. Although styles have changed, rulers have come and gone, and millions of people have lived and died, we find most of the Chinese still working and thinking and acting as their ancestors had worked and thought and acted in the first years of Chinese history. They govern their conduct today by wisdom that was slowly accumulated in the thousand and more years before Greek or Roman civilization even came into existence.

Families of China developed an Empire of their Own

Back before history was written even in China, people had settled in the rich river valleys of the Hwang and the Yangtze rivers and were cultivating their fields much as were the people living along the Tigris and the Nile. These two river-valley civilizations — the Hwang to the north and the Yangtze to the south — grew up and finally were united.

The kings of these early civilizations lived so long ago that they are now but mythical people. There was Fu-hi, who, the Chinese think, lived as long ago as 2900 B.C. The Chinese believe that he invented their musical instruments, that he discovered how to raise and use for food or burden-bearing the six domestic animals, — the horse, dog, ox, sheep, pig, and fowl, — and that he taught people how to catch fish in nets.

After Fu-hi another wise and revered emperor taught the people how to plant and reap, how to use herbs for medicine, and how to make wooden plows.

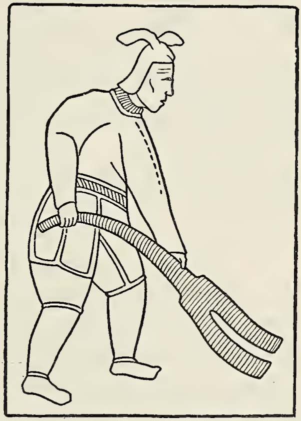


Fig. 173. Shannung, who reigned after Fu-hi, and who is supposed to have taught the people how to make agricultural implements. (Redrawn from an old print)

Whether or not these rulers really lived we cannot be certain, but at any rate we know that more than four thousand years ago the Chinese had tamed animals. In China man was able to raise them for food rather than to hunt them in the forests, and he could train these animals to work for him. Furthermore, he knew how to cultivate crops and even to use plows. In other words, we know that people in China *were living a settled, agricultural life.*

Hwang-ti, the Yellow Sovereign, lived nearer the days of written history. He was kept fairly busy driving savage enemy tribes away from the fertile fields of his people. But in spite of that he taught the Chinese many new and better ways of doing things. Under his rule they constructed roads, and carts to pull along the roads, and built ships to sail on the broad rivers. To encourage trade Hwang-ti had copper money made and established a fixed standard of weights and measures. He introduced the calendar, which made the planting and cultivation of crops more regular and dependable. Some of his officials discovered many interesting facts about the stars, and one astronomer is said to have invented the compass.

Hwang-ti's wife taught the people how to raise silkworms and to make silk thread from the fine filaments of their cocoons. People learned how to weave cloth from the silk and to make their clothes from it.

Most important of all, Hwang-ti's officials worked out a system of writing that made it possible to keep a real record of events. From then on regularly appointed historians kept accounts of happenings, the good deeds and the bad deeds of the emperors, and the ordinary events of the year. Some of these earliest records were lost, and we have only the records written from memory later. Even so, records of Chinese events go back almost 4000 years.

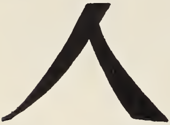


FIG. 174. Chinese written records were already ancient before Europeans had learned any way of keeping them at all. This Chinese sign stands for the word "man"

IN CHINA THE EMPEROR WAS EXPECTED TO RULE WISELY AND TO TAKE CARE OF HIS PEOPLE

The Emperor Yao, a great ruler, came to the throne in 2356 B.C. It is written that he said: "Are the people cold? Then it is I who am the cause. Are they hungry? It is my fault. Do they commit any crime? I ought to consider myself the culprit."

This was the way emperors were supposed to behave — as fathers and leaders of their people. An example of the way in which emperors came to the throne will show you how the people really expected their emperors or leaders to take care of them.

During Yao's reign the country was swept by a terrible flood. The waters of the Hwang rose higher and higher and destroyed people's crops and their homes. The people were suffering. An engineer, appointed to stop the flood, built walls; but the walls were washed away, and the flood was worse than before. The engineer was promptly put to death for his failure! His son, Yu, took up the work. He did not build high walls to hold in the waters. Instead, after eight years, he succeeded in deepening the channels of the rivers to carry the water faster out to sea. The Chinese have long said, "We should have been fish but for Yu."

Yu was then made ruler, because he had saved the people from the terrible floods.

Of course all the emperors of China were not by any means so noble as the first emperors are said to have been. Many were evil or cruel or stupid, and often failed to look after the welfare of their people. Only when they carried out the tasks of their position and served the people as good fathers did the Chinese respect their emperors, the officials, and the nobles.

One of the emperors wrote a poem which runs as follows:

When the members work joyfully
The head rises grandly,
And the duties of all the offices are fully discharged;
When the head is intelligent
The members are good,
And all affairs will be happily performed.[1]

Even if all the emperors did not live up to the responsibilities of their position, this ideal was always before them and the people never forgot it.

CITIZENS IN CHINA WERE RESPECTED AND ADMIRED ACCORDING TO WHAT THEY DID FOR THE COMMUNITY

The social position of citizens in China depended on several things. If one were inquiring about a Chinese gentleman, one would probably ask first, "Of what family is he a member?" If he belonged to a good and ancient family, that would mean a great deal. Next, one might ask, "What is his work?" What a person *does* is very important in China. If a man is thought to do a great deal for the community, he is an esteemed citizen. Occupations are ranked according to their value to the community. As you read of these occupations of China, try to compare the Chinese standards with our own.

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[1] Herbert H. Gowen, *An Outline History of China.* Copyright and used by permission of D. Appleton and Co.

The scholar or student occupied the highest place in China, because he was thought to be of most service to the community. Tests in scholarship had to be passed before people could take government positions. These examinations meant that scholars alone controlled the government and the high offices of China. The scholar was expected to know and to do what was best for the community. He was expected to lead the people wisely and to show them how to live happily together in their communities.

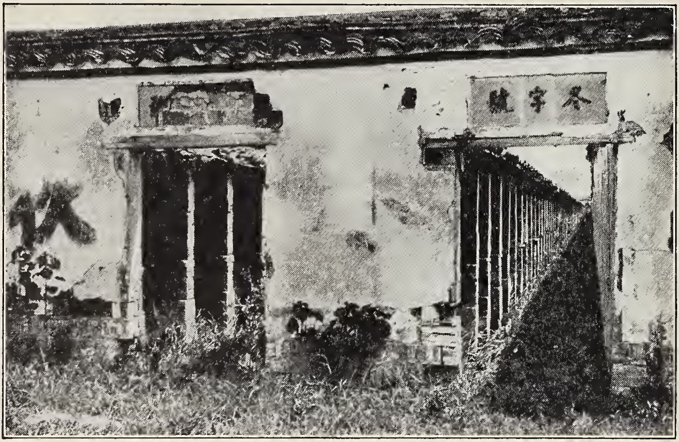


FIG. 175. Thousands of small rooms like those seen in the picture were used in ancient China by students preparing for examinations

To pass the examinations the students must be able to write poetry and to repeat from memory the Confucian classics. They must know the history of their country and the best literature of all periods. Not only this, they must be able to write what they knew in beautiful handwriting, for handwriting is regarded as an art in itself in China. Good examples of it are framed and hung on the wall. So highly are skill and knowledge in writing respected that, before the invention of printing, scraps of paper with Chinese characters (letters) on them were carefully preserved.

Next in rank to the scholar came the farmer. The man who provided food and life for the people was second only to the man who showed them the wisest way of living together. He was respected more highly than anyone except the scholar. The emperors encouraged agriculture and fostered an interest in it. Every year the emperor himself went through the ceremony of plowing a furrow of earth, to show that, heaven-sent though he was, he appreciated the importance of farming. At beginnings of the four seasons, ceremonies were held at the Temple of Agriculture in the capital city. The platform of this temple was built of five kinds and colors of earth from the five different regions of China.

After the scholars and farmers came the artisans — the builders, who made shelter, the weavers, who made clothes, and the ivory-carvers, who made beautiful ornaments. Craftsmanship, you see, ranking third, was not considered so important as either scholarship or farming.

Merchants came fourth. We, who live in industrial countries, know that without trade we could not live. We think of banks and stores, railroads, steamships, and cities as playing a necessary part in our very lives. In China people did not think trade was so important. To be sure, there was some trade, but very much less than in Europe and America.

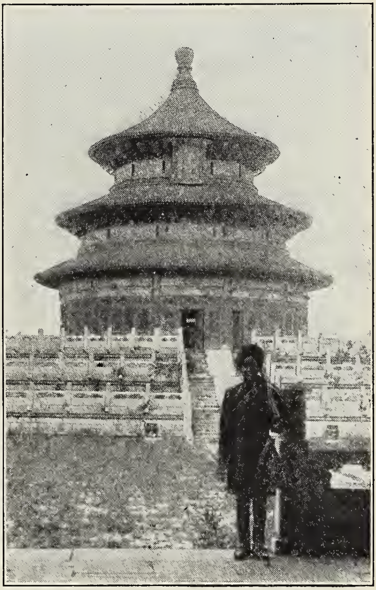


Fig. 176. Within this building, the Temple of Heaven at Peiping (Peking), the Chinese emperors prayed at a special altar in time of drought or famine

Following the merchant class came the servants and some unskilled laborers.

The soldier came last. He was the lowest of the low. This man, "who lived by violence," was respected the least.

What do you think of the Chinese way of rating people's importance? Do you know of any other country where the same order holds true? Can you think of another country where scholars come first? Does the merchant come next to last in the United States? Did the fighter come last in Prussia or in Rome? Do you remember the Norse traders who built up Russia? They had few scholars, and they made their farmers slaves. Would they have put fighting last?

From the very first there were many things in the Chinese civilization which seem to have been quite different from the civilization that grew up in the countries of Europe.

IN THIS LAND OF HEAVENLY EMPERORS THE PEOPLE DEVELOPED "DEMOCRACY" LONG AGO

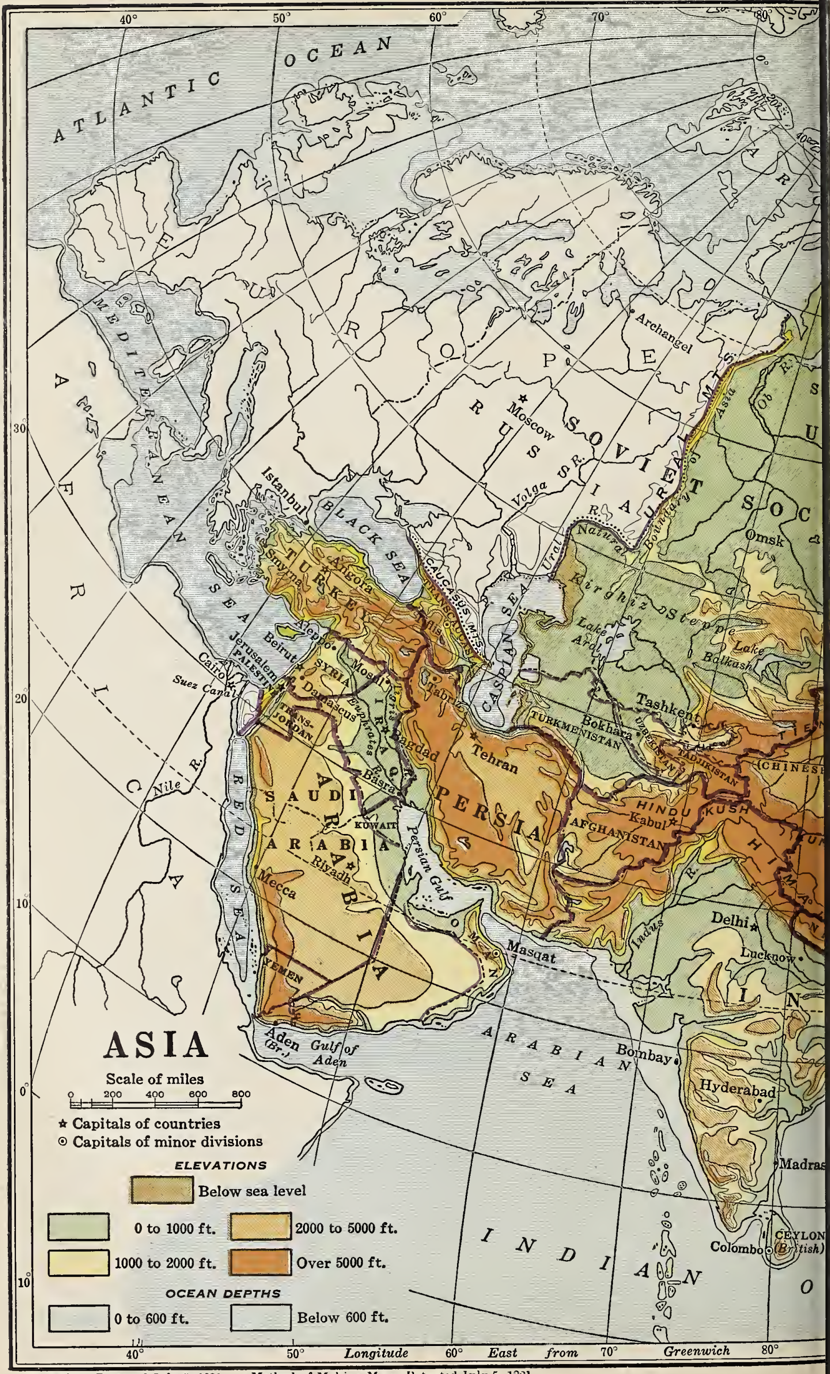
You have learned that until 1861 two thirds of all the Russian people were practically slaves and that several million black people in the United States were slaves. Slavery had existed in most countries of the world at some time. You have probably read accounts of the slaves in Rome, Greece, Egypt, Babylon, and Assyria. In almost every country of the world a small group of wealthy nobles held the masses of the people in the worst kind of slavery.

But in China there was very little slavery! It was the only one of the great empires of ancient times that did not depend upon slavery for the doing of daily tasks. In China *a "noble" was expected to be really noble.* He would not undertake to enslave his poorer neighbors and to seize power for himself. Small groups did not rule the country — the people did. At first the emperor chose his successor. Later the rule was passed on from father to son, but even then the people had power over the emperor. The following account from the Chinese *Book of History* shows how they thought of themselves and the emperor.

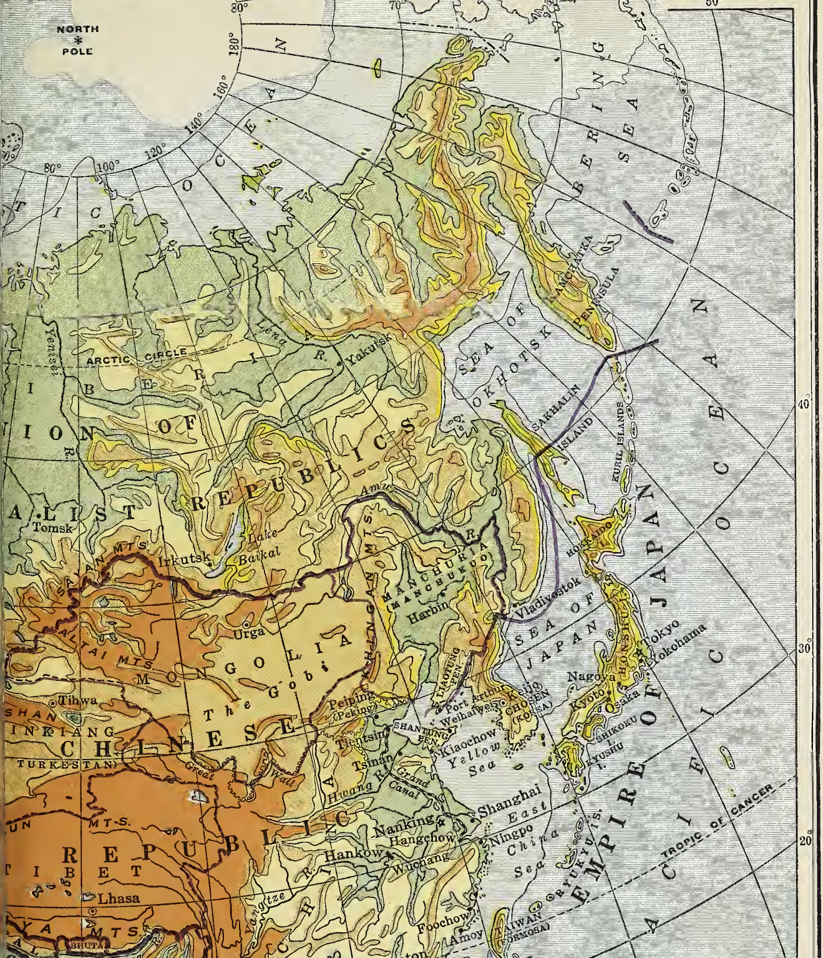
> What Heaven hears and sees manifests itself by the things which the *people* see and hear. What the *people* judge worthy of reward or of punishment indicates what Heaven wishes to punish and to reward. . . . Let those who govern the people be watchful and cautious!

The descendants of one emperor ruled for nearly 900 years

One family of Chinese emperors, the Chou (pronounced "chow") family, ruled over China for nearly 900 years (1122–249 B.C.). It was so long ago that it is hard to realize what a long period of


ASIA
Scale of miles
0 200 400 600 800
★ Capitals of countries
⊙ Capitals of minor divisions
ELEVATIONS
▨ Below sea level
▨ 0 to 1000 ft.
▨ 1000 to 2000 ft.
▨ 2000 to 5000 ft.
▨ Over 5000 ft.
OCEAN DEPTHS
▨ 0 to 600 ft.
▨ Below 600 ft.
ATLANTIC OCEAN
EUROPE
RUSSIA
SOVIET
Archangel
Moscow
Volga R.
Ural R.
URAL MTS.
Natural Boundary of Asia
Ob R.
Omsk
Kirghiz Steppe
Lake Aral
Lake Balkash
Tashkent
Bokhara
TURKMENISTAN
UZBEKISTAN
TADJIKISTAN
CHINESE
TIEN
HINDU KUSH
HIMALAYA
Kabul
AFGHANISTAN
PERSIA
Tehran
Tabriz
CASPIAN SEA
CAUCASUS MTS.
TRANSCAUCASIA
Tiflis
BLACK SEA
Istanbul
TURKEY
Angora
Smyrna
Aleppo
SYRIA
Mosul
Beirut
Damascus
Jerusalem
PALESTINE
TRANS-JORDAN
IRAQ
Tigris R.
Euphrates R.
Bagdad
Basra
KUWAIT
Persian Gulf
SAUDI ARABIA
ARABIA
Riyadh
Mecca
YEMEN
Aden (Br.)
Gulf of Aden
OMAN
Masqat
MEDITERRANEAN SEA
Cairo
Suez Canal
AFRICA
Nile R.
RED SEA
ARABIAN SEA
INDIAN OCEAN
INDIA
Indus R.
Delhi
Lucknow
Bombay
Hyderabad
Madras
Colombo
CEYLON (British)
40° 50° 60° 70° 80°
30° 20° 10° 0° 10°
Longitude East from Greenwich

Map Plate, Patented July 5, 1921 · Method of Making Maps, Patented July 5, 1921


NORTH
POLE
80°
70°
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50°
180°
160°
140°
120°
100°
80°
O C E A N
T I C
B E R I N G S E A
S I B E R I A
Yenisei R.
ARCTIC CIRCLE
Lena R.
Yakutsk
KAMCHATKA PENINSULA
SEA OF OKHOTSK
SAKHALIN ISLAND
KURIL ISLANDS
P A C I F I C O C E A N
40°
I O N O F
R E P U B L I C S
A L I S T
Tomsk
SAYAN MTS.
Irkutsk
Lake Baikal
Amur R.
KHINGAN MTS.
MANCHURIA (MANCHUKUO)
Harbin
HOKKAIDO
Vladivostok
SEA OF JAPAN
HONSHU
Tokyo
Yokohama
Urga
ALTAI MTS.
M O N G O L I A
The Gobi
30°
LIAOTUNG PEN.
Port Arthur
Weihaiwei
Keijo
CHOSEN (KOREA)
Nagoya
Kyoto
Osaka
SHIKOKU I.
KYUSHU I.
EMPIRE OF JAPAN
Tihwa
SHAN
SINKIANG
C H I N E S E
TURKESTAN
Peiping (Peking)
Tientsin
SHANTUNG PEN.
Kiaochow
Yellow Sea
Tsinan
Great Wall
Hwang R.
Grand Canal
Shanghai
KUN MTS.
R E P U B L I C
TIBET
Nanking
Hangchow
Ningpo
East China Sea
RYUKYU IS.
TROPIC OF CANCER
20°
Hankow
Wuchang
Yangtze R.
Lhasa
Tsangpo
LAYA MTS.
BHUTAN
Ganges
Brahmaputra R.
C H I N A
Foochow
Amoy
TAIWAN (FORMOSA)
Canton
Kowloon
Hong Kong (Br.)
INDIA
Calcutta
BURMA
Kwangchowan (Fr.)
10°
Hanoi
Irrawaddy R.
Mekong R.
FRENCH INDO CHINA
SOUTH CHINA SEA
Manila
PHILIPPINE ISLANDS (To U.S.)
YAP I.
PELEW IS. (Jap.)
Rangoon
SIAM
BAY OF BENGAL
Bangkok
Saigon
0°
MALAY PENINSULA
BRITISH MALAYA
Malacca Str.
Singapore (Br.)
OCEAN
SUMATRA
British
BORNEO
NETHERLAND INDIA
EQUATOR
NEW GUINEA
90°
120°
130°

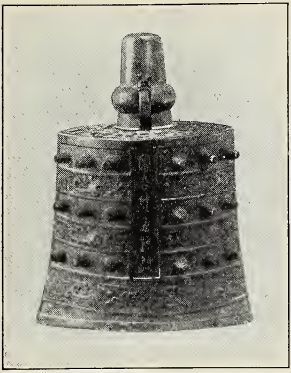

FIG. 177. A sample of ancient Chinese craftsmanship in bronze. This bell is said to have been made before 1100 B.C. (Courtesy of the American Museum of Natural History)

time was covered by that rule. China was not living in peace and quiet all those years, for various regions were at war again and again. Indeed, it seemed as if there were little peace. But throughout this long period, in spite of fighting and warfare, Chinese civilization *was developing steadily* under the leadership of a great family.

Among all the members of this family the Duke of Chou is remembered for his work in drawing up "the rites and observances that would promote peace and tranquillity in the empire." From these we can learn much about the life of the people. Remember that this was long before America had ever been dreamed of. It was before Christianity had come into the world! It was before the continent of Europe was anything but a great forest where roving hunters killed the ox and boar.

Work of Chinese craftsmen of 2000 years ago

Two thousand years ago a certain province of China, called Che-kiang, was a land in which men learned to be independent of craftsmen. Every man was his own maker of farming implements. In still another province, Chihli, armorers were not needed. Every warrior knew how to make his own metal helmet, breastplate, and weapons. This was likewise true of other provinces.

There were some craftsmen in China, however. They could work metals into swords and

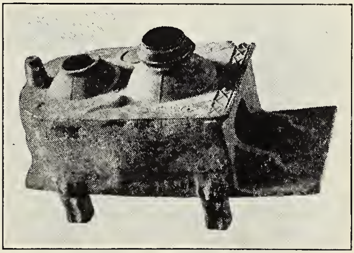

FIG. 178. The Chinese had learned to build stoves and to cook in bronze vessels like these before 12 A.D. (Courtesy of the American Museum of Natural History)

belts, bells and stoves, mold clay into bowls and other utensils for the household, and they could even build carriages and boats. This list tells you of some of the other craftsmen in ancient China:

THE WORKERS — ARTIFICERS

Wood

- Wheelwrights
- Carpenters
- Makers of carriage bodies
- Makers of bows and spear handles
- Makers of wagons and household furniture

Leather

- Makers of leather armor and fur garments
- Tanners of hides for binding and for drums
- Workers in leather for shoes

Workers in grinding or rubbing or polishing

- Workers in gems, maces, utensils
- Engravers
- Makers of arrow shafts
- Polishers of musical stone

Metals

- Makers of engraving tools
- Makers of spear points
- Makers of measures of capacity

Colors

- Drawers of flowers
- Workers in five colors
- Dyers of feathers and raw silk

Workers in clay or earth

- Workers in pots and jugs and finer earthenware

This sounds much like a list of crafts from the Middle Ages in Europe. But the Middle Ages of Europe came 1000 years later.

Here is a description of the craftsmanship of China over 2000 years ago.

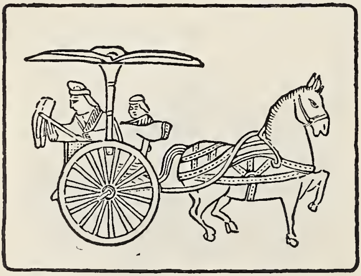

Fig. 179. An ancient Chinese chariot. (Redrawn from an old print)

The men of the famous Chou dynasty were noted particularly for their carriage-making. Many workmen with the aid of a set of rules used to work at this task. The rules had been worked out through long experience in carriage-making. They stated that the parts of the wheel should be carefully put together so that it would be solid and well-fitted. The wheel should be round and light in order that it might run smoothly and easily. The wheels should not be too high, for then it would be difficult for anyone to mount into the carriage. On the other hand they should not be too low, for then the horse would have much labor in dragging the carriage up a hill.

Confucius, a great scholar

In 551 B.C., under one of the emperors of the Chou family, a great scholar was born. During his life he wrote down the old wise Chinese sayings and thoughts, so that people might remember them easily. His name was Confucius.

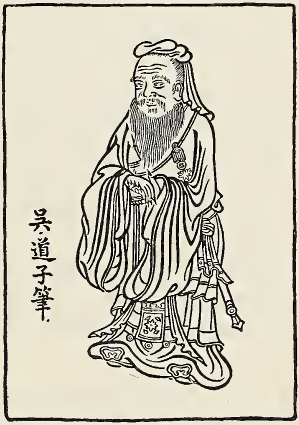

Fig. 180. Confucius. (Redrawn from an old print)

Confucius noticed things that other people had passed by and made clear many things which had not been thought out carefully before. He was so wise that he was made prime minister of his native state. Later, however, he lost the favor of the emperor and went into exile, traveling about, vainly seeking an opportunity to become a state official and carry out his ideals. At last he returned, not to manage affairs of state, but to live quietly as a writer.

Confucius spent much of his time teaching his ideals to young men. Students came to him to learn a little of his wisdom. Many of his teachings do not seem strange to us today, but to many of our ancestors in Europe they would have been very strange indeed.

Medieval Europeans found life so hard and so unhappy that most of them turned their thoughts to a dream of heaven, where they could live in safety and have no work to do after they were dead. Confucius, however, did not talk to his people about a heaven where good people could go after they were dead. He did not talk about what will happen *after* death at all. He said, "While you do not know life, what can you know about death?"

He taught them that the important thing for each person was to try to live happily with the people about him. He was not to think only of his own happiness and what he wanted to do, apart from everyone else, but rather of the happiness of his family and of the community in which he lived. Confucius taught over and over again the necessity of people's living together pleasantly. He wanted people to learn the great art of living together. He taught the duties of Chinese citizens to the community and to one another.

The sayings of Confucius were written and copied again and again. People who could not read learned his wise sayings by heart. Even today few Chinese are ignorant of them. So thoroughly are they implanted in the Chinese people that even now, over 2000 years after the death of Confucius, their influence is still felt.

In addition, these writings give us a knowledge of Chinese civilization during the long Chou dynasty, for Confucius did not originate all the ideas he expressed but often reworded old ideas in more beautiful language.

So lasting have been the teachings of this philosopher that even today one can see in many Chinese cities red temples erected to the memory of Confucius. The temple is always kept in good condition. There are no images or pictures in it — just a simple wooden tablet with the characters "Confucius" carved on it.

Occasionally rulers tried to change the life of China

As far back as 221 B.C. there came a ruler who tried, though unsuccessfully, to change China into new ways of living.

He wished to be known as Shih Hwang-ti, which means the "First Emperor." He was not like the emperors who had ruled before him, and he did not care to be reminded of them.

He had no reverence for the books of history, or for literature, believing that they kept the minds of the people filled with old ideas and old ways of doing things. He said the Chinese people must wipe out the past and start anew. So he ordered all books to be burned, except those which were about agriculture or medicine. Some books, however, were hidden by scholars, so that not all were destroyed. This great loss was unfortunate for us too, who would like to know more about ancient China.

But Shih Hwang-ti had a reason for destroying the old things. He wanted China to wake up, to change from her old ways. Chinese scholars and Chinese people were always looking backward and imitating the past. He wanted them to stop thinking the ideas of people long since dead and to express new ideas for themselves. He was interested in practical things,— in building and transportation and trade,— things which interest our people vitally today. He planned and directed great engineering feats by which he pierced mountains, leveled hills, bridged rivers, and built many roads.

The Great Wall stands today as proof of Shi Hwang-ti's ability

During this time all the early river civilizations, including the Chinese, were being annoyed by barbarians. These tribes were in the habit of swooping down from the hills to plunder or to conquer. They were Mongols, very much like the half-wild people who overran Europe at the beginning of the Middle Ages.

Now after Shih Hwang-ti had conquered and united all the provinces in China, he set about building a great wall. This wall, extending for 1500 miles along the hills and valleys far from the farm districts of the Hwang, separated the Mongolian plains from China.

It was wide enough in some places so that four horses could be driven abreast along its top. At short intervals there were watch towers, where soldiers were stationed, and at longer intervals small forts, where whole companies of soldiers could be stationed on duty.

The picture of figure 181 shows a part of the wall in the desolate hills of China. It was no easy task to build this wall. Think of the planning, the overseeing, and the hosts of laborers it required! Think of getting workers and materials together in such a place and of getting food to them.

Yet this wall was not made under the lash of slave-drivers, as were the pyramids. The following story could not have been told about a ruler of Egypt.

It is said that when this emperor traveled around the country, the people who knew beforehand of his coming repaired the

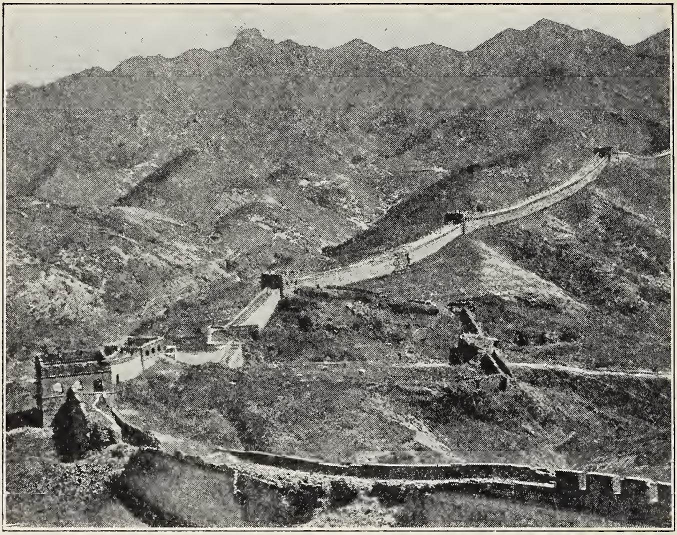

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Fig. 181. A part of the Great Wall which was begun by the Emperor Shih Hwang-ti

roads over which he usually traveled. But he was in the habit of inspecting roads other than those over which he was expected to go, to see if they too were good. Sometimes he found these roads in bad condition, so he said:

> These roads that have been built for me are very satisfactory, and I am greatly pleased with them. But it is not just that I, who may never come this way again, should be granted this convenience alone, when my subjects are in greater need of good roads than I. Thus I command that this method shall cease, and that good roads shall be made in all directions throughout the empire, when all the people will be benefited.[1]

Shih Hwang-ti must have been a very great emperor, indeed, but he did not succeed in shaking the Chinese people out of their old ways and customs.

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[1] G. Waldo Browne, *China, the Country and the People,* p. 297. L. C. Page & Co., Publishers, Boston.

For many centuries the Chinese people slowly developed their civilization far from the changing West

In the days when our ancestors in Europe were still wandering tribes, the Chinese were building up a settled civilization, writing poetry, painting pictures, building temples, and creating other works of art. They were writing philosophical works of great importance, and making inventions and discoveries which did not occur to Europeans until many centuries later.

A hundred years might not see any change. A thousand years might see a little change. While ancient Egypt and Niñeveh were forgotten, while "eternal" Rome fell and the changes of the Middle Ages followed, the Chinese lived on. They tilled their fields, labored at their crafts, and increased their store of scholarly wisdom. While all Europe was in a state of fighting, Chinese families calmly drank their tea, cultivated their rice fields, and repeated the teachings of Confucius as unchanging China had done for centuries.

Without the barriers of the mountains and deserts around them, and without the Great Wall, China might have fallen before barbarians as Greece or Rome did. But from the time of the building of the Great Wall (approximately 214 B.C.) to the time of the Middle Ages in Europe, China was free to continue her old ways of doing things.

When after more than 1000 years of effort the barbarians led by Genghis Khan did break through (about 1200), the Chinese civilization was so well established that, far from trying to change it, they soon fitted themselves into Chinese ways. Kublai Khan,[1] grandson of the great leader of the tribes that came over from Mongolia into China, moved his court to Peking (the Chinese city today called Peiping) and ruled there for many years. So many of the ministers and governors whom he appointed were Chinese that today people almost forget that he himself was not Chinese.

Toward modern times a Chinese family (the Mings) took the control of China out of the hands of the descendants of Genghis Khan. They lost the great territory which the Khan had controlled, clear across the Asiatic steppes into Europe, but the old Chinese provinces of Tibet, Mongolia, and Manchuria remained a part of the Chinese Empire. The Mings ruled until about 1643. During this time European traders came in increasing numbers to China. Their coming was often attended with misunderstanding.

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[1] *The Travels of Marco Polo* gives the best description we have of China under the Mongol khans.

In 1644 the Manchus, another northern tribe, conquered China and ruled it until 1911; but Chinese customs and ways of living went on much as they always had, for the Manchus were absorbed by the Chinese civilization. They too became "Chinese."

Emperors came and went, barbarians threatened and were driven back, but the Chinese people continued to live on in much the same old ways. The people became more numerous, and the Empire grew and became more and more unified.

Throughout all these centuries China thought little about the West. The Chinese regarded the Europeans as barbarians, much as they had regarded the Mongols. Europe was far away, a place beyond the limits of Oriental civilization, a world apart. Why should China think of it at all?

We shall see in another chapter how in the 1800's strangers forced their way into China and made her, in spite of herself, take on strange customs and foreign ways.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*Synge, M. B. A Book of Discovery. G. P. Putnam's Sons, New York, 1925. Chapter LXX (The Exploration of Tibet).

*Williams, Archibald. The Romance of Modern Exploration. J. B. Lippincott Company, Philadelphia, 1910. A book of thrilling travel episodes. See especially Chapters I–V

*Van Bergen, Robert. The Story of China. American Book Company, New York, 1902. A good history of this ancient country.

Magazine Articles

*"A Thousand Miles along the Great Wall of China," *National Geographic Magazine*, February, 1923, pp. 113–143.

"Banishing the Devil of Disease among the Nashi," *National Geographic Magazine*, November, 1924, pp. 473–499.

*"Chinese Characteristics," *Literary Digest*, January 28, 1922, pp. 40–42.

*"Houqua of Canton," *Asia*, October, 1925, pp. 823–827.

*"Special China Section," *Literary Digest*, January 21, 1922, pp. 21–66.

*"The Descendants of Confucius," *National Geographic Magazine*, September, 1919, pp. 253–265.

"The Emperor of All Men," *Asia*, December, 1926, pp. 1068–1073.

"The Web of Life," *Asia*, October, 1928, pp. 812–819.

CHAPTER XVIII

HOW OLD CHINA LIVES AND WORKS

China: What does it include?

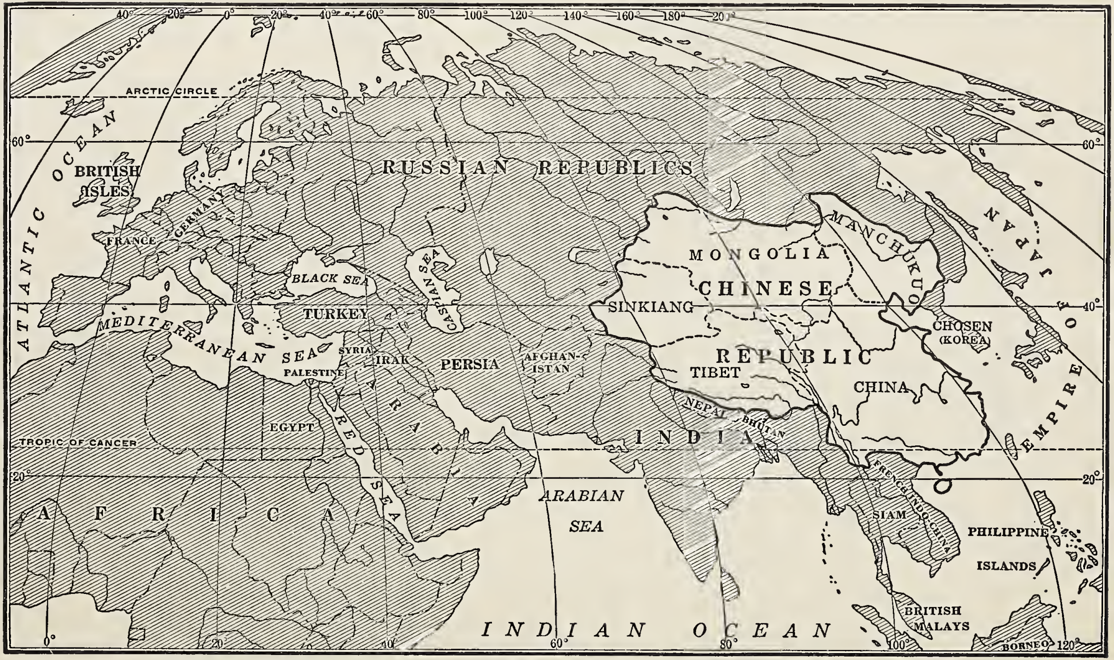
It is important to know what is included when we speak of "China."

China, you remember, began as a group of little settlements along the Hwang and Yangtze rivers. From there it spread east to the sea. Under various rulers, during several thousand years of history, it spread west and south, too, as the Chinese conquered the few native peoples in these regions. Later, China took in all the provinces which are shown on the map of figure 182. These we include in "China proper." The Chinese sometimes speak of this territory as the "Middle Kingdom."

The khans who conquered China expanded the old boundaries to include an enormous kingdom. This kingdom included a much greater territory than is shown on the map. It even took in part of Europe!

When the rule of the khans came to an end, China dwindled to about her old size, but four territories that had paid tribute to the Grand Khan at Peking remained with China. These were Manchuria (now called Manchukuo), Mongolia, Chinese Turkistan (now called Sinkiang), and Tibet — the large provinces lying to the west and north. Until recent years they were ruled by representatives of the governments at Peking.

These four outlying areas are inhabited today by Chinese people, and also by "natives" — mixed descendants of barbarians and Chinese. Their customs, dress, and ways of living are more nearly like those of the Chinese than of any other people. When we think of China *as a whole*, then, we include all these territories; that is, both China proper and these four outlying territories. In making comparisons of China with the other parts of the world as to size, population, etc., we shall include all this territory under the term "China."


ARCTIC CIRCLE
ATLANTIC OCEAN
BRITISH ISLES
FRANCE
GERMANY
RUSSIAN REPUBLICS
BLACK SEA
CASPIAN SEA
TURKEY
MEDITERRANEAN SEA
SYRIA
PALESTINE
IRAK
PERSIA
AFGHAN-ISTAN
EGYPT
RED SEA
ARABIA
TROPIC OF CANCER
AFRICA
ARABIAN SEA
INDIAN OCEAN
MONGOLIA
CHINESE REPUBLIC
SINKIANG
TIBET
NEPAL
BHUTAN
INDIA
MANCHUKUO
CHOSEN (KOREA)
CHINA
EMPIRE OF JAPAN
FRENCH INDO-CHINA
SIAM
PHILIPPINE ISLANDS
BRITISH MALAYS
BORNEO
40°
20°
0°
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60°
80°
100°
120°
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160°
180°
200°
60°
40°
20°

Fig. 182. China occupies nearly a fourth of Asia, the largest continent of the earth

How Large is China? How Many People are living There?

No one knows exactly. No very accurate census has ever been taken, and the estimates of the number of people living in China vary a great deal. Some are as low as 300,000,000; some are as high as 440,000,000. We can be sure of one thing: the number is very, very large — without doubt larger than 350,000,000. Many writers on China today use the round number of 400,000,000 people; so we shall use this number in our work.

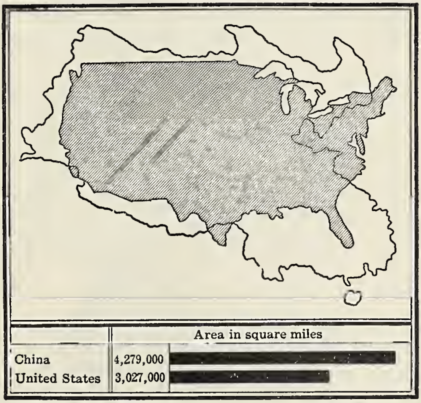

Fig. 183. China, with three and one-half times the population of the United States, has only about one-third more area

Of course there are many other "Chinese" people besides those in China. In Indo-China and the Malay Peninsula Chinese are working as farmers or laborers or traders. In Singapore Chinese are the principal business people of the city. In the Philippines, in Hawaii, even in the United States, there are many Chinese.

It was estimated that in the year 1928 as many as 6,000,000 Chinese were living in countries outside the Chinese Empire.

The area of China is more than one third larger than that of the United States. The population, however, is nearly three and a half times as large.

There is another thing you must take into account when you think of the population of China. Even if the 400,000,000 people lived scattered all over the country, it would still be about three times as densely populated as the United States. But the 400,000,000 people live crowded together in one third of the area of China. It is as if all the people of the United States lived in a small area about the size of Texas and New Mexico. Imagine all the people in the United States crowded together in those two states. A recent estimate shows that in the most crowded part 3800 people, 384 donkeys, and 384 pigs are living in one square mile!

Most of the people live in China proper

Figure 184 shows how thickly the regions of China are settled. This shows very clearly that people live together in greatest numbers on the southeastern coast and in the fertile valleys of the rivers. In those regions the climate is warmer, frequent rains moisten the soil, rivers can be dammed to flood the rice fields in planting seasons, and transportation back and forth along the rivers and canals is very easy. Therefore these river regions are very inviting, and living is so much cheaper and easier there than in other regions that multitudes of Chinese make their homes on houseboats.

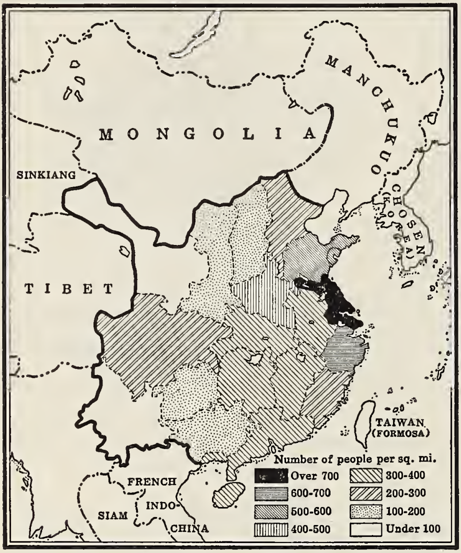
MONGOLIA
MANCHUKUO
SINKIANG
TIBET
CHOSEN (KOREA)
TAIWAN (FORMOSA)
FRENCH INDO-CHINA
SIAM
Number of people per sq. mi.
Over 700
600-700
500-600
400-500
300-400
200-300
100-200
Under 100

FIG. 184. China proper, like India, is a country of dense population. Do the same reasons which partly account for India's dense population also help to account for the density of China's population?

Notice the black spot on the map of figure 184. This is the region around the mouth of the Yangtze River. In this region more than 700 people live on every square mile of land. Of course the higher, less fertile lands are not so densely inhabited. But even here is an average of 100 people to the square mile. Note that in only two of the provinces of China proper are there less than 100 people to the square mile, and these provinces are farthest from the coast.

In contrast to China proper the population of Mongolia and Manchukuo is very small. Mongolia averages about 2½ persons to the square mile. The Mongolians are a nomadic people who live in tents and use the land — which is too poor for the cultivation of crops — for grazing herds of sheep. Most of the Chinese people who live in Mongolia are merchants who set up shops in the villages, where they trade with the Mongol horsemen and with the Russians who have come into this territory from Siberia.

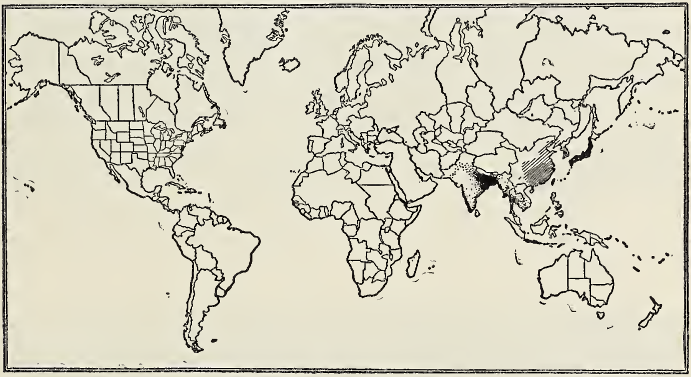

Fig. 185. Where the world's rice is grown. The importance of China as a rice-growing region is made clear by this map. The diagonal lines show where much rice is grown but where no estimates of the quantity have been made

On the great plateau of Tibet also grazing is the chief occupation. In most parts the earth is not fertile, and it takes a good deal of ground to afford a living for each family. The mountains of Tibet abound in wild animals; therefore hunting the animals and trading their fur are the two other chief occupations of the country. But where hunting and grazing are the chief occupations of a people, you will find the population small. It takes much land to provide a bare living for herds and people.

Why do so many Chinese live in the small river-valley areas? The Chinese, like other people, have to make a living, and they have settled in the places where this is possible. They have learned that it is easier to get a living in the midst of the crowds along the Yangtze than off by themselves in the hills. Why is this?

In the river valleys the climate, the soil, and the broad rivers make large crops possible. Then, too, the Chinese have learned to produce certain foods — rice especially — so abundantly that even the dense population can be fed mainly by growing this one food.

CHINESE FARM PRODUCTS

1. Many of the Chinese people spend their lives cultivating rice

Millions of people work in the rice fields of China. Rice-growing is hand farming. The fields must be prepared with the greatest care, and year in, year out, plot after plot must be planted, cultivated, and harvested. In the warmer parts of China the rice fields yield from three to six crops a year.

The picture of figure 186 illustrates how embankments are made through the field to divide it into many smaller basins. These lie most of the time under water. First, the mud is plowed up by rude implements pulled by water buffaloes. Animals and human muscles furnish the only power in cultivating rice.

After the field is prepared the rice plants, which have been raised from seed sown thickly in one small nursery bed in a corner of the field, are transplanted and set out evenly all over the field.

The work of keeping the fields properly watered is important. Where the land is hilly and the fields are terraced along the slopes, this is fairly easy. The water from streams flowing down the slope is conducted to the fields. It enters an upper terrace, and then trickles down from that field into a lower one through little openings in the embankments. The water must not be allowed to lie stagnant.

In the river valleys the water is brought up to the field. A rude sort of paddle wheel splashes or scoops it up from the river into the channel. All day long, workmen tread the paddles, pushing the wheels around with their legs. The water is forced from the channel to an upper field, and then settles down through small openings in the embankments and flows slowly from plot to plot and back to the river.

When the rice is ripe the field is drained, and the farmer cuts his crop with a hand sickle. Then the rice stalks are collected. The heads are then shaken off. This is done by hitting the stalks over

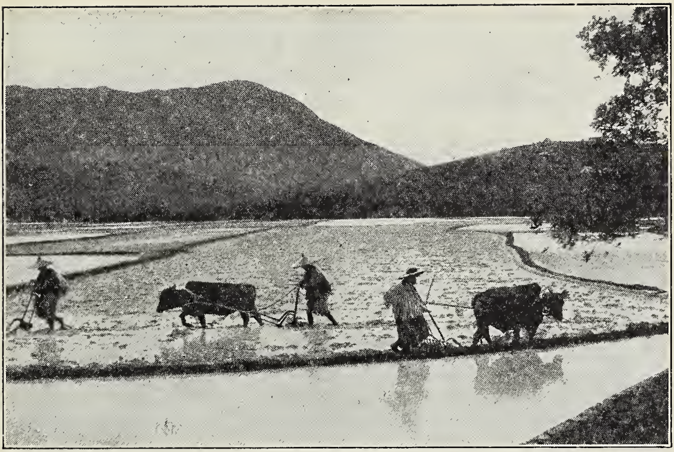

FIG. 186. Plowing a field in China before transplanting rice

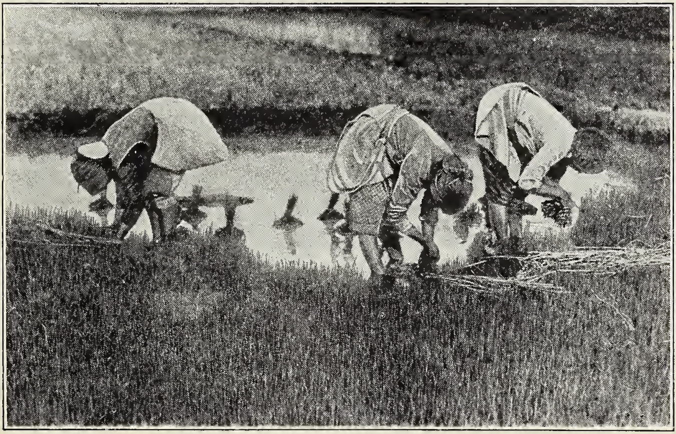

FIG. 187. Chinese women picking out the rice plants which are to be set in the newly plowed ground

the edge of a basket until the heads break from the stems and fall into the basket. The rice is then ready to be husked.

In order to do this, the grain is carried in baskets to a hard plot of earth which all the villagers use as their threshing floor. Here women and children thresh the grain, rubbing the husks off by tramping on them with their bare feet. Sometimes farmers use a flail with which to pound out the grain. A roller drawn over the grain by an animal may also be used to do this work.

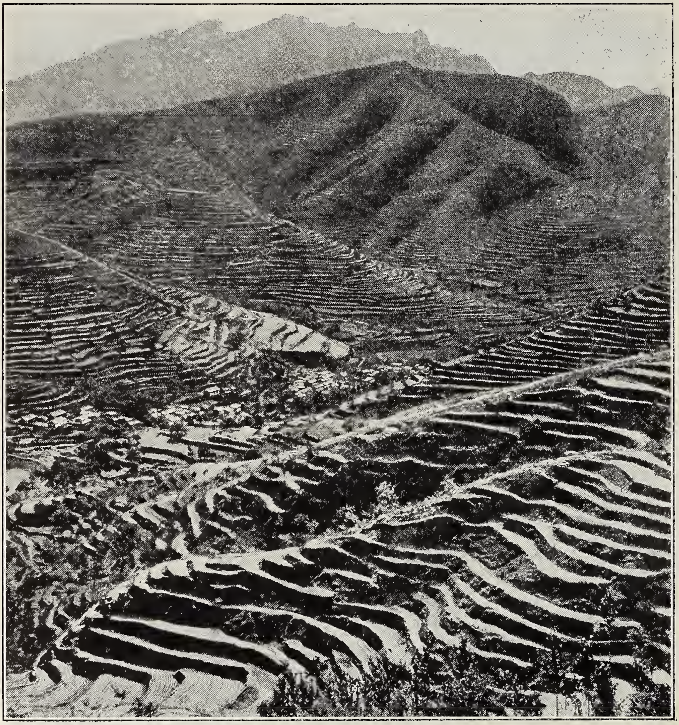

Fig. 188. The rice terraces of China. Even on the mountain sides the ground is cultivated, for there are many mouths to feed

After husking a fair amount the workers collect the rice in basket trays, which they bounce up and down, either blowing the loose husks off or letting the breeze carry them away. The chief food of the Chinese people is at last ready to be cooked and eaten.

How does this process compare with the cultivation, harvesting, and threshing of grains in the United States?

2. Silk is an important agricultural product of China

China and silk? Of course! Throughout ancient times and on through the Middle Ages, China made and sold most of the silk of the world. No European country knew the secret of silk-making. Many people thought the delicate threads were taken from trees. Finally, it is said, some monks who went to China hid some of the eggs of the silkworm moth in their hollow bamboo staffs, and thus they carried the secret back with them to Europe. But although a few European countries have since learned how to produce silk, they have never excelled the Chinese. Silk-raising remains one of the leading occupations of China.

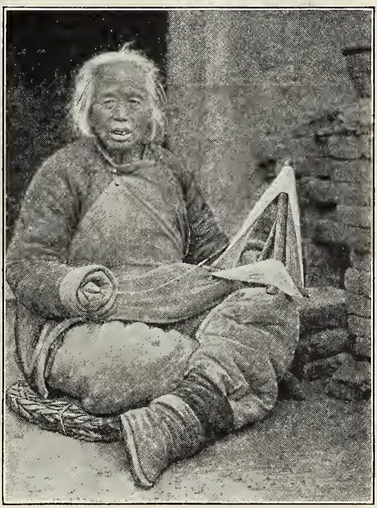

Fig. 189. After the silk has been spun into threads, it is wound ready for the market. This Chinese woman uses her spare time to earn a little money, as did the people on the manors of medieval England. This is a picture of "old China." How can you tell?

Suppose that you are a Chinese boy living in a village near Canton. In the spring you go to the market with your father. At the market merchants have their sheets of silkworm eggs on display. On each sheet is an even, gummy layer of thousands of eggs. Your father examines the sheets carefully and, after bartering with the merchants, rolls up some sheets and starts home.

When you get home you make sure that the hatching-room is at the proper temperature. It must be dark and warm; so you keep the little charcoal stove going constantly to maintain an even, warm temperature. You put each egg sheet in a clean basket and put the basket in the hatching-room.

In about two weeks the eggs will hatch. The tiny worms cannot chew whole mulberry leaves, which are the food for grown worms; so you gather tender mulberry leaves and cut them as fine as hairs and sprinkle them over the paper. The baby worms suck out the juice. Then you sweep the leaves up into a bunch with a goose feather.

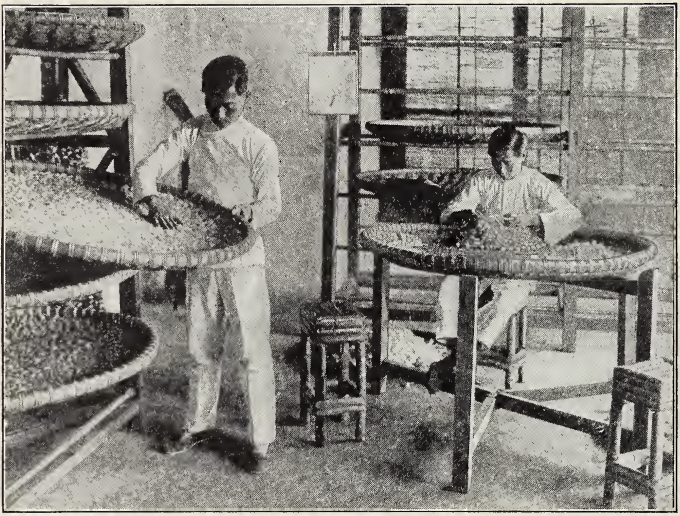

FIG. 190. Sorting cocoons in one of the new industrial plants in China. This is a picture of "New China." How can you tell?

There is no time to waste. You keep cutting up young leaves and sprinkling them over the growing worms every two hours all day and all night. After three days they "go to sleep" for 24 hours. Then they burst through their old skins and come out in new soft ones.

After this your troubles increase. The worms, now much larger, are so hungry that when you enter their hatchery you can hear them chewing busily at the mulberry leaves. Five different times the worm eats its fill, rests, bursts through its old skin, and emerges larger and hungrier. While it is resting a single draft of air, too much light, or a sudden noise may kill it. You must feed it enough, but not too much. Sometimes one worm sleeps while another eats. That increases the difficulty. Thousands of ever hungry boarders with very sensitive natures are not easy to please.

At last the worms are big enough to eat whole leaves. How their jaws click at their meals! It is like the patter of rain on a roof.

You keep removing left-overs from the trays, so that they will not spoil and thus offend the worms. You gather mulberry leaves (unless you buy these from a mulberry merchant) until you are too weary to stand up. If the leaves are wet from a rain, you must dry each leaf before cutting it up; the worms do not like wet leaves. Every sheetful of worms eats almost a ton and a half of mulberry leaves.

But your work has only begun when the worms have been fed. On the seventeenth day the pale worms, about as big as your little finger, are raising their swelling heads and looking aimlessly about. You lift out these worms that are "ripe" and put them on spinning racks or twigs. You take the racks or twigs into a shady outdoor place in the daytime and into the warm house at night. On them the worms spin their cocoons.

When the cocoons have been spun you drop them into boiling water. Your sister bobs them about with chop sticks, collecting the wisps of silk and unwinding the slender threads of three or four cocoons at once onto a spindle or spool. Or you may stifle the worms by putting the rack over a smoking charcoal stove and taking the cocoons to market in bales or baskets. The cocoons will then be taken to a place where girls will pull the strong fine threads into strands and wind them on a reel, just as your sister would have done at home.

Each cocoon contains from 500 to 1000 yards of silk thread. How many mulberry leaves do you suppose you picked and dried and shredded? How many times have you fed the charcoal brazier and cleaned the worm trays to make that thread of raw silk?[1]

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[1] Adapted from C. W. Howard's *Sericulture Industry of South China*, a publication of the Canton Christian College, College of Agriculture, Canton, China, January, 1923.

3. China raises many other products

While almost everything that China grows or mines or manufactures is done by means of muscle power, she still produces enough of many commodities to supply herself. She is even able to export a share of some of them. Notice on the table the list of her principal exports.

Tea also is very important to the Chinese themselves, though it is not important in Chinese trade as formerly.

Articles exported by China in 1925	Per Cent of Total
Beans and bean products . .	18.16
Silk, raw	18.07
Cotton, raw	3.84
Coal	2.57
Millet and sorghum	2.56
Egg albumen and yolk	2.31
Wood oil	2.24
Peanuts	2.22
Cigarettes	1.96
Silk piece goods	1.99
Wool, sheep's	1.81
Skins and hides, undressed . .	1.74
Tin in slabs	1.55
All other exports	38.98

In northern China not enough rice can be grown to furnish the people a living. Millet, however, is raised in great quantities and furnishes the everyday food just as rice does in the south. Here too — as well as in Manchukuo — soy beans are raised in great quantities. This crop is produced not so much for food as for fertilizer. The beans are ground and pressed to make cakes of fertilizer (much of which is shipped to other countries). The oil which is squeezed from them furnishes the cooking oil of China. Peanuts also are raised.

China has become a large producer of cotton, ranking after the United States and India. Today cotton is China's fourth largest export. Moreover, China herself uses a great deal of cotton. The everyday dress of most of the working people in China is now made of cotton dyed a vivid blue, which has come to be referred to as "Chinese blue."

The dependence of the people on land and weather

China is, indeed, one great farm. Perhaps it would be more accurate to say that China is a big garden, for many of the agricultural products of this vast land are garden products. The farms themselves are very, very small. In the fertile valley of the Yangtze River the average farm is only two acres in size.

A steep hillside is not waste land in China but is used for rice fields, just as the sunny hills of Italy are used for growing grapes. Every inch of soil is used. How well this is brought out in the photograph of figure 188!

Hillsides where once forests probably grew thick and tall are now terraced rice plots. It is difficult to hold the soil on the steep slopes; so walls are carefully built and the earth nursed with tender care, terrace above terrace. When the season is severe and the rains very heavy, the walls or embankments are sometimes washed away, and the fertile soil is all carried down into the valleys.

But the farmers must take their chances. Someone has said that farmers are the greatest gamblers in the world, for they depend on the weather, over which they have no control. The Chinese farmers plant their crops in hope, knowing that a flood may mean death by starvation. When these floods ruin the crops in the crowded districts, there are terrible famines. You may remember reading of the floods along the Mississippi River in our own country. Such floods occur from time to time in China. They are the dread of the Chinese, as droughts are the dread of the Russians.

In such terrible times of famine people eat roots and even dirt. Though only two or three small meals a week would keep them alive, they die of hunger.

Chinese Farmers, like the Peasants of Europe, live in Villages

There are hundreds of thousands of villages all over China. But a Chinese village is not just a collection of neighbors living in one community. It is a group of families very closely bound together. Just as the elder of the family governs the family, so the elders of the village govern each little community. Each village has its own customs, its own laws, and its own government. To most of the people of China the central government, which has generally been at Peiping, means little. They pay their taxes to the central government, and beyond that they think little about it. Their thoughts do not wander far beyond their own rice fields.

Sai Shan — a typical village in the plains

We remember a visit to the small village of Sai Shan in southern China several years ago. We can see it now as it looked when we approached it across the hills.

It is a hot afternoon. The barren hills stand up against the flat checkerboard of tiny rice fields.

Before descending to the plain we stop at one of the resthouses beside the dirt road. We buy some sugar-cane sticks from a peddler and get a little hot water from the old man tending the charcoal brazier, over which a kettle of water is steaming. We make our tea and look down over the valley.

Here and there villages dot the plain. They make darker spots in the fields, because they are green with bamboo groves and massive banyan trees. Only in the villages can soil be spared for trees; so the groves we count here and there along the river mark the villages for us.

Sai Shan lies between the road and the river.

The curves of a temple stand out against the sky a little above the gray-slate and thatched roofs of the ordinary houses. We are to visit at this temple, where the school-teacher and his wife live and teach. We shall be entertained in the hall of the forefathers, where there is the tablet to Confucius. We shall sleep in the guest room and sun ourselves in the open court, which forms the center of the hall.

After our cup of pale-yellow tea we descend to the valley and follow the granite road. In a clump of trees we see a couple of boys tending water buffaloes. Sai Shan lies off the road; we turn into a dirt path that runs along the embankment between rice fields. It is a hard path, long ago packed firm by the many feet that run along it. Pigs are rooting in the bamboo grove. We pass the fish pond, where ducks are swimming, and where a woman is pushing scum away from the bank so that she may wash her clothes. Here and there men are toiling in the rice fields.

The village is quiet. We see no one on the streets; we cannot see behind the "spirit" screens into the houses (each house has a screen just inside the door to keep the "devils" away). Dirty and bedraggled chow dogs run up and bark at us, and a few children watch us pass. But we see no one else. We pass a shop — a miniature "general store," where meat, fish, children's clothes, jade trinkets, and canned milk are displayed.

Sai Shan must be prosperous. It has a cement threshing floor. The threshing floor is empty today; indeed, the whole village seems empty. Everyone is away, working in the fields, for it is now time to harvest the rice and everybody is needed to help.

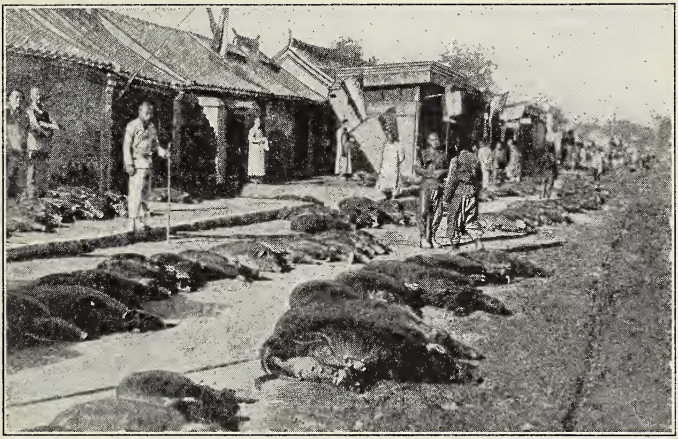

FIG. 191. A Chinese village scene. Tomorrow will be market day, and these pigs will be put into baskets and loaded into the carts that are to carry them away to the city. (Courtesy of Princeton-in-Peking)

In the morning we shall make an early start, and our friend will serve us an early breakfast. If we are lucky we shall be through by eleven o'clock, though we may be a little rude by cutting short the ceremony of a guest breakfast — chicken, fish, potatoes in gravy, and, greatest delicacy of all, hen's eggs which have been buried so long that they are black. The 25 miles to the next village we shall cover in the heat of the day. One of us will jounce along in a little country chair slung between two poles, which two workmen from the rice fields will shoulder, and the rest of us will walk, in greater comfort but less style.

The next village we come to will be much like Sai Shan, no matter which way we go.

Whether the population is 100 or 1,000,000, most communities are "villages" in China. Some villages of China have 100 or 200 souls. Some have 1,000,000! Cities in the American sense of the word never existed in China till the Westerners came to build them. Fatshan, a place of 450,000, near Canton, is really a country village. Even Chinese cities are but groups of small communities thrown hit or miss together. They have the *size* of a city but not the appearance, the life, or the organization of a city in the United States.

Large Villages are the Centers of Chinese Crafts

Every small village has its craftsmen. It has its shoemaker, who sells his wares from his own workshop. It has its barber, who walks through the street carrying his razor and other equipment with him (he is also the "eye, ear, nose, and throat specialist" of the village). Many other occupations are represented.

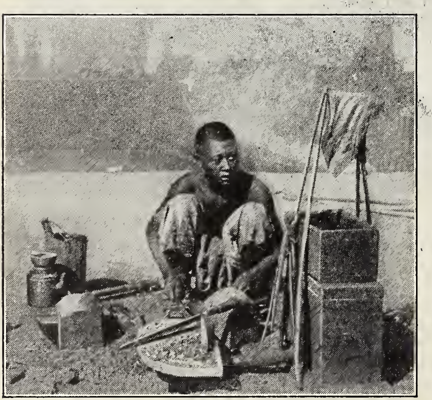

Fig. 192. Besides specialists in every craft, there is to be found in Chinese settlements the "handy man," who will repair anything from a porcelain bowl to a machine

In Canton and other cities one finds craftsmen in abundance. There is "Shoe Street," the row of the shoemakers, whose shops are side by side. In these shops they both make and sell their wares. On Shoe Street one can buy thick, felt slippers at twenty cents a pair, straw sandals, and elaborately embroidered satin shoes.

There is "Jade Street," where carvers in jade sell that precious stone, which is so dear to the Chinese. Even the lowest workman of the rice field, or the coolie who pulls the jinrikisha, has his jade trinket. So much do people prize jade that the highest compliment one could pay a young man would be to say "he has a heart of jade."

There is "Dress Street," where embroiderers sit at their work, and looms display half-finished beautiful brocades.

In the large cities there are wicker or teakwood furniture shops. There are lacquer shops, where tea chests and trays are carefully made and decorated with elaborate gold patterns on black. There are hat shops and shops of ivory-carving.

There are matting-manufacturers — places where coarse sailcloth and rice-straw mats are made. There are tile works, which make the gray tiles for Chinese roofs. There are establishments where fine porcelain is made and decorated.

China today, as a thousand years ago, is a country of fine crafts.

How are Goods transported in China?

1. Lack of roads makes land transportation difficult

In raising his crops and getting them to market the Chinese farmer depends on his back or on the crudest of tools and carts.

When the vegetables or rice or cotton or mulberry leaves are ready to be taken to market, they are loaded into baskets. These are attached one at each end of a pole, which is then shouldered and carried like a yoke.

If a single pig is to be sold, it is put into a sort of basket frame slung on a pole, which two coolies shoulder (see figure 193). Along the narrow footpaths on the embankments between the rice plots the Chinese coolies go at a rhythmic stride. When several are together they keep time with singsong chants.

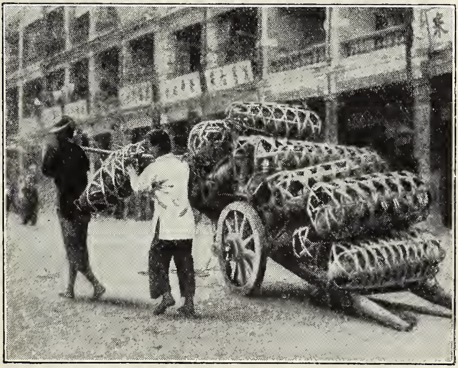
© De Cou

Fig. 193. Carrying pigs to a city market in China. When many pigs are to be sold, they are loaded into basket frames onto a cart drawn by men; but when a farmer has a single pig to sell, it is slung on a pole

It is almost impossible for us to imagine the condition of travel between Chinese villages. One can travel for many miles in the southern and central parts of China without seeing a single road or bridge. From every village there are uneven footpaths running out across the rice fields. So narrow are they that two persons cannot walk side by side. How difficult it is to move crops, fertilizers, and all supplies along these paths! Unless the village happens to be on a canal or a river, there is no other way of transportation to the next village but that of human backs. Now and then one encounters a trail on which horse-drawn carts can go. But in central and southern China there are almost no roads suitable for even rough wheeled carts. Men and women are practically the only draft animals.

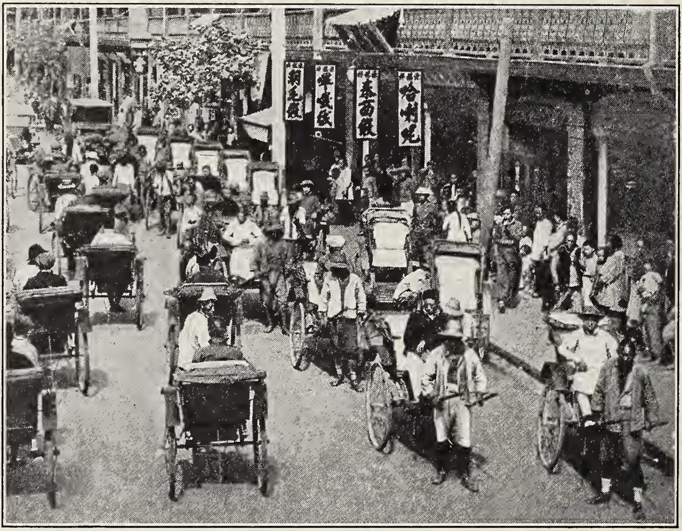

FIG. 194. Human muscles still largely take the place of animal and mechanical power in China. The jinrikisha is the most common vehicle in Chinese cities

All kinds of freight are pulled by men and women. In the cities — for example, Shanghai, Canton, Nanking — a dozen or more men and women workers may frequently be seen pulling a single great load. In the United States and in some European countries such heavy loads would be hauled by motor trucks. But in China one can hire ten coolies for less money than he can hire a cart and an animal.

Out of every nine adults in Peiping one is a jinrikisha-puller.

2. By far the largest part of China's freight is carried on river boats

Transportation in China has always been by the many rivers and canals. Since ancient times Chinese junks and rafts have carried goods up and down the waterways. Chinese history and Chinese life are bound up with the rivers, on which thousands of people spend their lives.

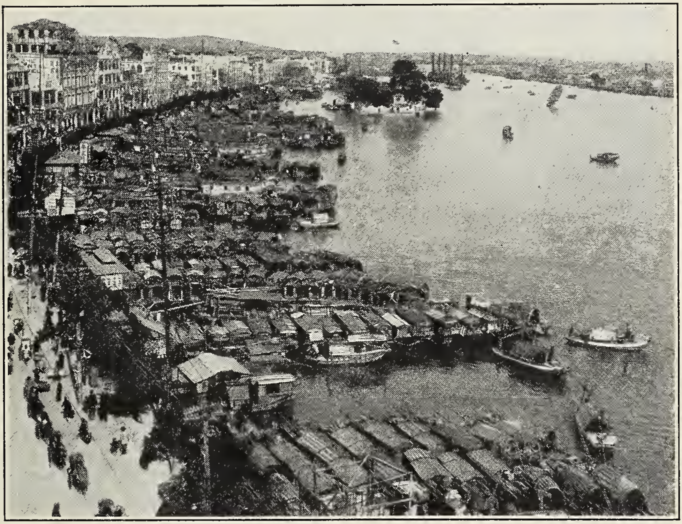

FIG. 195. Five hundred thousand people of Canton's population live on boats along the shores of the Pearl River. (Courtesy of Canton Christian College)

In Canton alone there is a boat population of over 500,000. These boat people, who make their living by carrying passengers and freight, pass their whole lives on small boats, or "sampans." They eat and sleep there. Children play there. Very young children sometimes have boards fastened to their backs, so that if they should fall overboard they will float and be picked up.

Then there are bigger boats, or "junks," which are gaily painted. In these modern days the junks are towed by steam launches. In the old days they were propelled by great paddle wheels, and even now on the interior rivers of China this old method is used. The coolies turn the paddle wheels by treading on them, much as they turn the water-splashers at the irrigation ditches.

Sailing boats also go up the broad Yangtze. Where the river is narrow, poles or towropes help them along.

So important has this river traffic always been in China that canals have been built to connect river systems. They form a network of waterways. Canals within cities bring produce right to the shops and green vegetables to the households. One canal in particular, the Grand Canal, is of great importance in China. It extends for 1000 miles, from the plains at Hangchow to the mountains north of Tientsin. It and its many small branches are used to irrigate the rice fields as well as to carry the produce of the valley. This canal was begun in 540 B.C. and completed 1320 A.D., and it is still in use.

There are railroads in China, too, between the largest cities, and some telegraphs and telephones. But that story must be told in another chapter.

THESE, THEN, ARE THE "UNCHANGING CHINESE"

After all, railroads, telegraphs, telephones, etc. are not really China — neither the China of yesterday nor the China of today. They may be the China of tomorrow. The China of today, as of yesterday, is the China of rice fields, of the tending of silkworms, of the endless carrying of things, of the making of fine things by hand, and of the observance of ceremonies in the family. Those are the characteristics of the "unchanging Chinese." They are true of the Chinese villagers today.

But China *is* beginning to change. It too is just beginning to feel the influence of Western ways of living. For several hundred years Europeans have been going to China to trade, to teach, to introduce the Christian religion. For a long time the Chinese held aloof. They would not trade, they would not be taught, and they would not adopt another religion.

But gradually they did change. Very slowly, and only in the cities, they began to adopt Western ways of manufacture, of transportation, of trade, of education, and of dress. Not for 100 years after the beginning of the Industrial Revolution in England did any change come in China, however. To part of that story we turn in the next chapter.

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CHAPTER XIX

"THE CHANGING CHINESE"

Forget for a minute the twentieth century, and go back 300 years. You are in a cool garden in the Chinese hills. Great gongs clang now and then in the distance, and the green-black trees hide the chirping birds from your sight. The quiet servant is bringing tea. You smooth out the heavy silk of your coat and gaze out beyond the red gate to a sky dazzlingly blue.

What is beyond your garden? Where do the trails over the ageless hills lead?

No one knows.

Out beyond the great hills barbarians, wild and ferocious, ride their swift ponies to unknown lands toward the setting sun. Centuries ago the Grand Khan led these people into China, and it was said that his empire extended to the farthest limits of all that was created.

Of course, this was not so. No one in China knows how vast the world is.

You sip your tea and think of a poem you have just read.

True, from time to time people have come from beyond these highest of mountains, the snow-capped ranges lying to the southwest. They have brought strange things with them. They have brought tales of other peoples and other ways. Probably most of it is idle gossip.

You saunter to the garden gate. How wonderful to be living in the greatest of all courts, here in the center of the world. Such a privilege carries a great duty. You must become wise indeed.

This imaginary moment in a garden of China, 300 years ago, can give you only a faint idea of how little the Chinese were interested in any other world but their own.

China, as far as she knew, was the only great center of civilization in the world. In past centuries barbarians from the north, if they conquered her by greater strength, had stayed and become

Chinese. People in the outlying provinces had bowed before the great "Celestial Empire." People in the islands across the China Sea, the Japanese, had copied the Chinese ways and tried to become like them.

Occasionally, however, traders brought objects from other lands beyond China. They came from the far-distant Western countries. The three Polos, merchants from Venice, had come to China in the latter part of the thirteenth century. European monks too had visited the Grand Khan at about the same time. Later other Europeans had made the long, dangerous journey. But, for the most part, the Chinese had been indifferent to them.

In the 1500's European traders appeared in China's harbors

In 1516 for the first time in our historical records a ship sailed all the way from Europe to China. It was a Portuguese ship that had gone around the continent of Africa, across the Indian Ocean, through the islands off the southern end of China, and up the river to Canton. This was perhaps the longest sea voyage that had ever been made. Curiosity about the world and a desire for trade were carrying European people into many new lands. They were venturing farther and farther on the great unknown oceans.

The Chinese knew nothing of these "barbarian" Westerners except that they had suddenly arrived in their ports by *sea*, as they had never done before.

The Portuguese sailors took their boat up to the river harbor and leased a place at Macao for a trading post. They soon began to trade with Chinese merchants in silk, tea, spices, and ivory. We are told that they took what they did not buy and pay for, that they plundered villages and carried off people, and that they broke open the tombs of venerated emperors. Those were the days when European sailors took whatever they desired.

The Portuguese were only the first of many traders and adventurers from the West. Other daring seamen soon followed.

One Chinese writer said:

> During the reign of Ching-ti foreigners from the West [Portuguese] who said they had tribute, abruptly entered Canton River and by their tremendously loud guns shook the place far and near. This was re-

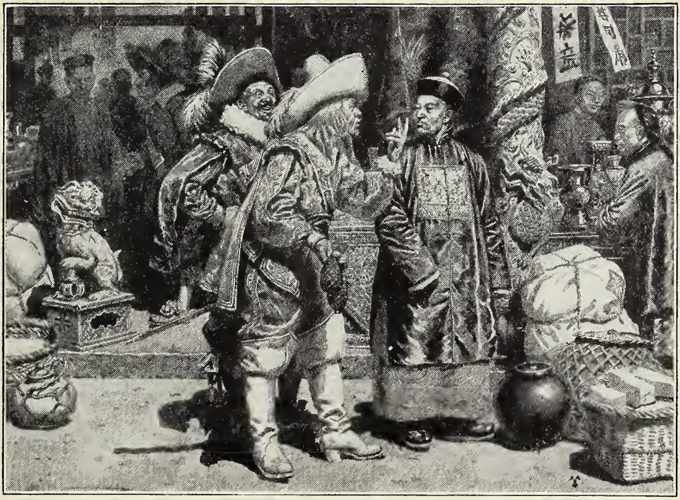

FIG. 196. As the artist imagined early trading between the Dutch and Chinese

ported to the Court, and an order returned to drive them away immediately and stop their trade. At about this time, also, the Hollanders who in ancient times inhabited an island territory and had no intercourse with China, came to Macao in two or three large ships. Their clothes and their hair were red; their bodies tall; they had blue eyes sunk deep in their heads; their feet were one cubit and two tenths long; and they frightened the people by their strange appearance.[1]

Thus we see that the Dutch soon followed the Portuguese. They too leased a trading post. Then in the 1600's came the English East India Company, which established a trading post at Canton.

Even people from America crossed the great Pacific in the 1700's. The Russians too began to go overland through northern Asia to trade with China. Both Protestant and Catholic missionaries came to try to convert the Chinese to Christianity.

Thus as early as the 1700's strangers from the West came into China in increasing numbers. Some came officially, sent by governments. Others came to make converts to the Christian religion. Most of them, however, came to make money in trade.

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[1] S. W. Williams, *The Middle Kingdom.* Charles Scribner's Sons, New York, 1901.

WERE THE CHINESE GLAD TO SEE THE STRANGERS?

An old Chinese saying shows how the Chinese thought travelers should behave when entering a foreign country: "When you enter the frontiers inquire respecting the prohibitions; when you enter a country inquire into its customs."

This the European traders did not do. These "barbarians," as the Chinese called the Europeans, were, in most cases, not careful to learn Chinese ways and to respect them. They acted according to the ways of their own countries, which the Chinese considered very rude.

Their presence annoyed the Chinese a great deal. The traders who had come overland had been well received. For the most part they had behaved humbly enough. But the seafaring traders were very difficult to deal with. They behaved a great deal like ordinary robbers, and they showed no consideration for the Chinese customs or people. The Chinese did not know what to think of them.

You can imagine some of the difficulties when you remember how the Chinese regarded their own soldiers and merchants. Soldiers were people of the lowest rank, and even merchants were not regarded very highly. These foreigners from the West were merchants, and they carried weapons and fought as soldiers. Of course, the Chinese with their different customs did not respect the Europeans.

At first China kept a strict control over the Europeans

At first the Chinese government was able to manage the foreigners, so that they did not annoy the people. But in the early 1800's the government was obliged to make certain rules which traders in the East India Company were to follow. Regulation 5 stated:

> Foreigners must not row about the river in their own boats for pleasure. On the 8th, 18th, and 28th days of the moon, they may take the air as fixed by the Government in the 21st year of Kea-King (1819). All ships' boats passing the customhouses on the river must be detained and examined, to guard against guns, swords, or firearms being furtively carried in them. On the 8th, 18th, and 28th days of the moon these

> foreign barbarians may visit the Flower Gardens and the Honan Buddhist Temple, but not in droves of over ten at one time. When they have refreshed they must return to the Factories, not be allowed to pass the night out, or collect together to carouse. Should they do so, then, when the next holiday comes they shall not be permitted to go. If the ten should presume to enter villages, public places, or bazaars, punishment will be inflicted upon the translator who accompanies them.[1]

As long as the traders from the West could be so controlled, China was in no danger of losing her old civilization.

So China kept apart from the Westerners.

How European countries obtained privileges in China

The Celestial Empire did not want or need the manufactures of "barbarians." There were many Chinese things which were in demand in the West, but it was difficult to persuade the Chinese to accept Western products in exchange. However, the Chinese came to like very much one product which the Europeans had to sell. That was opium.

Opium is a drug. When it is smoked it clouds the mind and destroys the strength of the body. People who smoke opium get the habit of using it and find it difficult if not impossible to stop using it. Today the nations of the world have an agreement not to sell such destructive drugs to one another. But there were no such rules back in the early 1800's.

Opium has been used in China as a medicine for over 1000 years. But it had not been smoked for pleasure. About 1650 the Portuguese traders sold some opium in China. The Chinese government tried to stop this trade but was not successful.

In 1729 the emperor of China issued an edict, or order, forbidding the smoking of opium. It had little success. Other edicts followed, but none of them did much good. Opium-smokers who had developed the opium habit could not stop, and they were willing to pay large sums for the drug.

Until the early 1700's only small quantities of opium were shipped into China.

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[1] Bertrand Russell, *The Problem of China*, pp. 47–48. The Century Co., New York, 1922.

For hundreds of years the poppies from which opium is made had been grown in India, where the ruler of the country had a monopoly of the business. In 1757 the East India Company took over the monopoly, increased the production, and enlarged the opium trade with China. In 1729 only 200 chests had been sold to China. In 1790 (61 years later) in spite of imperial orders 5000 chests of opium were imported into China from India. In 1838 as many as 20,000 chests were sold, and in 1858 no less than 70,000 chests! The last figure represents a very large amount of opium. The great increase in the trade shows how rapidly the Chinese people were adopting the harmful opium-smoking habit.

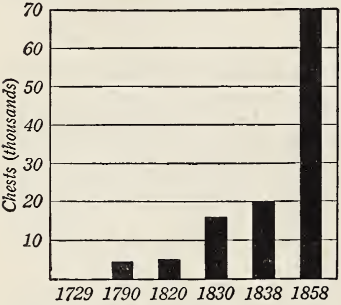

Fig. 197. The bars show the growth in the imports of opium into China between 1729 and 1858

The officials of China did all they could to stop this traffic. In 1796 the *importing* of opium was forbidden, and people caught smoking it were punished by being sent out of the country or even by being put to death.

Nevertheless, the habit spread. In less than 100 years it became a great and terrible menace in China. The opium-smugglers, some of whom were Chinese, became bolder. The Chinese officials did not have the guns and soldiers which would make it possible to stop the armed smugglers.

They tried to appeal to the honor of the Western countries, some of whose citizens were getting rich at the expense of the Chinese drug-smokers. In 1839 Commissioner Li sent a dignified plea to the queen of England. He told of the terrible influence of opium on the Chinese people and pleaded with Queen Victoria and the British government to stop the trade. But the answer which the British government gave was war. In the following years the English carried on one little war after another with China. Each time Great Britain triumphed, and China had to give way to her demands. In that way Great Britain secured from the Chinese government land in China and the payment of money.

As the result of the first war, 1840–1842, China granted to the British the island of Hongkong. Today Hongkong is one of the most important ports in the world. China also was made to agree to open other ports to European trade and to permit Europeans to enter Shanghai, Ningpo, Canton, Foochow, and Amoy. She had to pay $21,000,000 to foreigners. China was beginning to change.

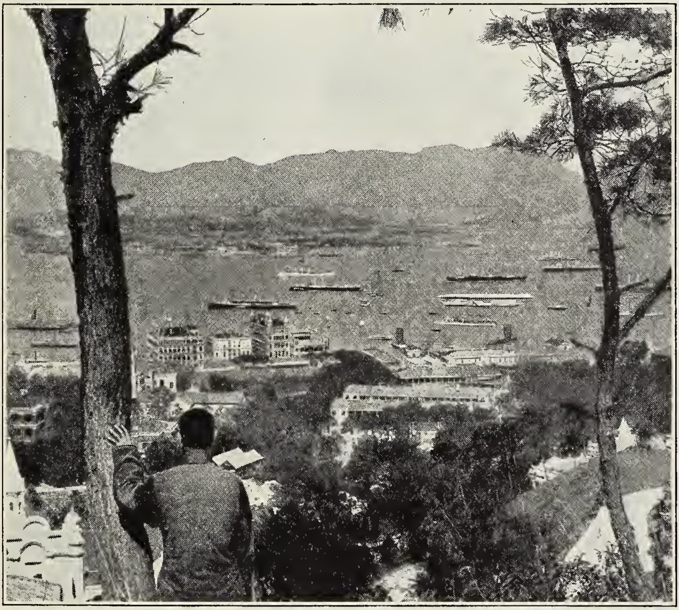

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Fig. 198. The harbor at Hongkong, a possession of Great Britain and her most important trading point in China

After the second war, 1856–1860, the British were granted the port of Kowloon across the harbor from Hongkong. Eight other ports were opened, and China paid $4,000,000. China also had to consent unwillingly to the open sale of opium. From then on until 1907, or for about 50 years more, foreigners were free to sell opium to the Chinese people.

Finally the British agreed to stop the export of opium to China on certain conditions. In 1907 Great Britain agreed that each

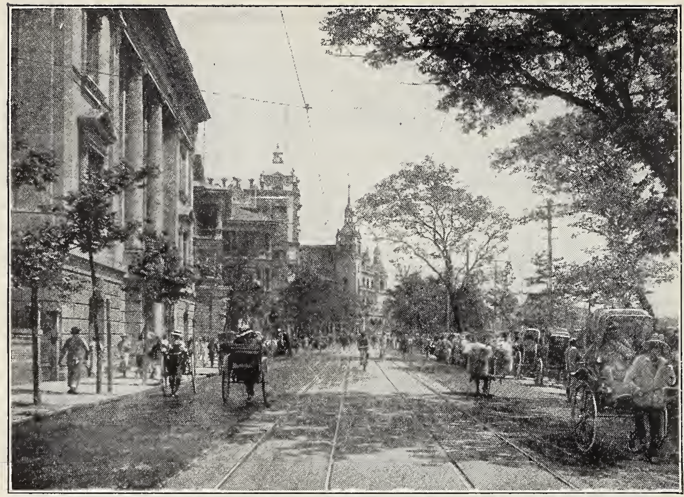

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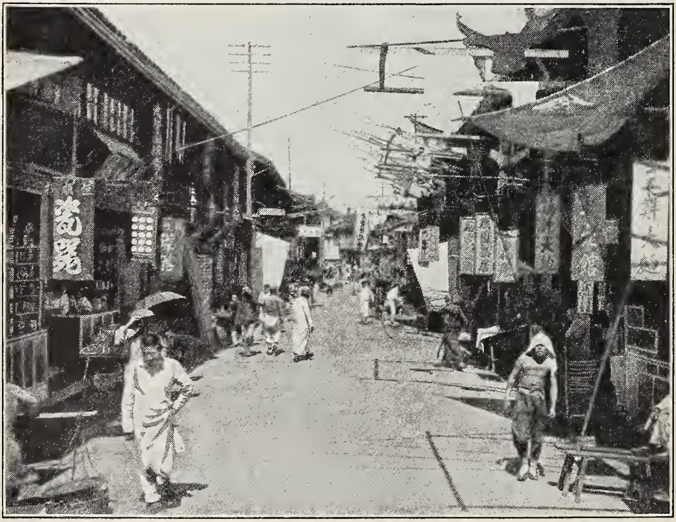
FIG. 199. The Bund, the finest street in the "foreign" section of Shanghai. Notice the trolley tracks and wires, the broad street, and the massive buildings. Do they show the influence of industrial civilization? Compare the picture with figure 200

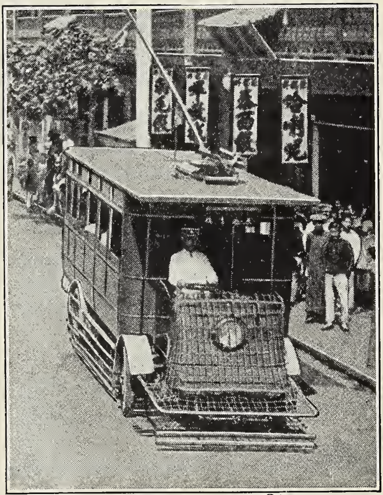


© E. M. Newman

FIG. 200. A street in the old section of Shanghai

year for ten years she would reduce the amount of opium exported from India by one tenth. That meant that by 1917 she would send no opium whatever into China. This she would do on one condition, that by 1917 China should stop all growing of the opium poppy. China carried out her part of the bargain even before the end of the ten-year term. In 1913 the British government in India, seeing that China had stopped opium-growing entirely, discontinued the trade at once, although it meant a loss of several million dollars a year. Today the sale of opium is not allowed by the government of China, except in such small amounts as are needed for medicines or for scientific work.

Large quantities of opium are still smuggled into China, and there is still some opium-growing there. At the international conference on opium and drugs held in 1925, an Englishman who was on the opium advisory committee said that a few of the British colonies were still drawing a large amount of revenue from taxes on the sale of opium. Some of this opium is still going into China.



© Ewing Galloway

FIG. 201. The new trackless trolleys now in use in Shanghai show how progressive the city has become

The opium trade cost China more than the harmful effect of the drug on her people. It cost her many people who were killed in the wars, large sums of money, and the loss of many ports and sections of land to Europeans. Opium-traders really brought about the end of China's independence of the Western world. After her ports were forced open to traders she steadily lost one thing after another to the Europeans, who insisted on entering the country.

When the British, the French, and other Western people moved into Shanghai, they were given a mud flat outside the walls of the ancient Chinese city, for the Chinese law did not permit foreigners to own land within the city. The Chinese officials suggested that the foreigners have their own courts and their own city government. The Europeans went to work on their mud flats and built a modern, foreign Shanghai, with broad clean streets, a healthful water and sewage system, parks, and a fine residence and business district. Shanghai today has three separate foreign sections outside of the Chinese city, each with its own government.

In Canton the foreigners also built their own section. Today the Westerners live by themselves on an island in the Pearl River, away from the main part of the city.

This condition was true wherever they went. Always they built up their own community, for no foreigners, except missionaries, could own land within the cities.

Japan defeated China, 1894, and Took Land and Privileges

Japan had already begun to imitate the ways of the West. With startling rapidity she was building factories and railroads and digging coal and iron. Then she too came to China for privileges and land.

This was a strange turn of events. For example, she wanted Korea, the part of the mainland of Asia nearest to Japan, and had tried for centuries to get a foothold there. But Korea was a tributary state to China.

In 1894 certain Koreans were protesting against Chinese rule. Japan took the opportunity to send soldiers into Korea, and this, added to other events, brought about war with China. The Chinese soldiers with their crude equipment were no match for the modern guns of the Japanese. At the conclusion of the war in 1895 Korea was made independent, and China gave up the large island of Taiwan to Japan. She also had to pay Japan $100,000,000.

It was humiliating, indeed, to be defeated by Japan, who in the past had learned so much from them, thought the Chinese leaders. They themselves now began to learn from Japan of the increased power which came from adopting the ways of the Westerners.

To pay off her debt to Japan, China commenced borrowing money from Europeans, and this put her more and more in the power of other nations. She borrowed heavily from Great Britain and other European countries and as security gave railway and mining rights and the privilege of using certain territories for 99 years.

She granted permission to Russia to build the Chinese Eastern Railway. She granted land to France and permission to build on it the Yunnan Railway. In the same way Germany got permission to build the Shantung Railway.

She promised to pay her debts from the revenue she took in on customs duties, and a foreigner was appointed head of the customs to see that this was carried out.

Thus with every conflict China was forced to give up more and more of her territory. She had to give permission to more and more foreigners to settle in her land, bringing their industrial civilization with them. It remained to be seen whether or not China would become another India or Africa, merely a colonial possession of industrial nations.

Attempts of the Chinese to save their Country — the Boxer Uprising

The people of China disagreed as to what they should do. Some thought that only by driving out the Europeans could they keep China for the Chinese. Others wanted to work out a plan by which they could coöperate with the Europeans for the development of China. The Boxer Rebellion is an example of the way some Chinese people tried to deal with the foreigners.

In 1899–1900 small groups of Chinese began to form societies, or clubs. They called themselves the "Boxers." The Empress Dowager of China was a leader of these groups, for under the rule of her family, the Manchus, the Chinese had continually suffered at the hands of the foreigners. The Empress Dowager knew that the Manchus were not popular, and that people blamed them for allowing their country to be humiliated by Great Britain, France, Germany, and Japan. The Empress Dowager, like the other Manchus, did not know what to do about it. The best thing she could think of was to urge the people to rise and destroy all the foreigners.

It was a foolish idea. How could they, who had always lost when they had attacked the foreigners in the past, hope to win now that foreigners were everywhere? The whole world was changing and it was impossible for any one nation to live apart from all the others.

Nevertheless, in 1899 and 1900 the Boxers organized a rebellion and began killing foreigners all over the land.

The result was what they might have expected. An international army arrived. Soldiers from many Western lands — Great Britain, France, Germany, Russia, even Japan and the United States — came to China. They easily took Peking and established military guards.

The uprising was crushed, and its failure showed how impossible it was for China to keep the Europeans away with the old methods of warfare. The Chinese had to pay a very large sum of money to the Western countries, $325,000,000 in all.

Young Chinese who studied in the Industrial Countries tried Another Way to save their Country

After the Boxer uprising the United States set aside part of the money China paid her to finance the sending of Chinese boys to American schools. In the past 30 years many thousands of Chinese students have come to American schools and colleges. They saw what industrial countries were like, what the people did, and what they thought. Many other Chinese students went to European schools and colleges. This was the Chinese people's first real glimpse of Western civilization as it really was. It stirred in many of them the desire to try to give China some of the same things. They saw that the people in Western countries were in better health than they and their neighbors in Asia, and that they did their work more easily by the aid of power-driven machines and transportation. They saw the sanitary sewage systems of the American cities, the broad, well-paved streets, and the fine parks. They noted that hours of labor for most people were not more than eight or nine hours a day. They saw that the mass of the people could read and that they had many varied recreations.

So these young Chinese students determined to educate *their* people, so that they should have some of these things.

One of these students was Sun Yat Sen. When Sun Yat Sen traveled for the first time on one of the foreign-built ocean-going ships, the thing that impressed him most, he said,

> more than the wonder of the engine, and more than the wonder of the flaming boilers, was just a beam of iron that reached through from one side of the ship to the other, to strengthen it.[1]

He explained why as follows:

> To me it appeared to be a most colossal affair, and I remember wondering how, with its great weight, enough men could get hold of it to put it into its place. This thought flashed through my mind, that the same mechanical genius that had made the great iron girder had also devised means to handle it mechanically. I immediately realized that something was wrong with China, for we could not do the things that the foreigners do.[1]

He knew that China was older than any of those countries in the West. Her civilization was older, and yet she was unable to keep the Westerners from getting control of her land and people. Something was wrong. Something must be done.

First, the students got rid of their Manchu rulers

First of all, the students said the rule of the Manchus must be abolished. More capable people should be allowed to lead the Chinese. The Manchus, who had governed China since 1644, were not Chinese. They were really foreigners, just as the Mongol khans had been. Although they had taken on Chinese ways and civilization, the Chinese people never thought of them as really belonging to China. Again and again they had let their people be humiliated by the foreigners. They had allowed the Portuguese and Dutch to enter; they had allowed the British, the Americans, the French, the Germans, the Russians, and the Japanese to follow the Dutch traders.

They had not prevented the sale of opium. They had lost every war in which they had engaged, and they had saddled the Chinese people with heavy debts.

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[1] Paul Linebarger, *Sun Yat Sen and the Chinese Republic.* The Century Co., New York, 1924.

So Sun Yat Sen and other educated Chinese went about the country urging the people to free themselves. China must be ruled by the Chinese, he said.

Sun Yat Sen and his party started a revolution which finally overthrew the Manchus in 1911. Sun Yat Sen himself was elected first president of China on New Year's Day, 1912, but he resigned in favor of Yuan Shih-kai, who became the first president on February 27, 1912.

Now the Chinese students were free to lead the Chinese people in what they thought was the best way. They said that the first thing the Chinese people needed to do was to learn the ways of the Westerners, or "ocean men" as they were often called. They must learn how to make things, transport things, build clean cities, develop schools, etc. as the Westerners did.

Japan had done this, and Japan had been successful in protecting herself. In 1904 Japan had even succeeded in defeating a great European country, Russia, in the Russo-Japanese war. A fine chance China would have had of defeating Russia! Yet Japan was not nearly so large as China. Until very lately Japan had been no more than an unknown little island country lying out beyond the Chinese sea. Japan's success made a great impression on the Chinese people. China must do as Japan had done, some of the students said. She must become industrialized!

Second, the students educated many Chinese to adopt the ways of the West

As the Chinese had permitted more and more Europeans to come into China the latter had introduced many new Western methods of industry. They had built railways, opened coal mines, and even built a few factories, where they manufactured goods.

Now China herself began to do the very things which for years she had tried to prevent the foreigners from doing.

She began to build her own railways and factories and to operate her own mines. When foreigners had built the first railway, the Chinese had been terrified. They called it the "snorting rail dragon." They raised enough money to buy the line and then tore it up and shipped the rails out of the country.

But now things were changed. Now the Chinese themselves began to lay tracks for the snorting rail dragons.

The map, figure 53, shows the important railways in China. Of course, most of the railways today are those built by foreigners. Of the railways in use today, most of them are in central and eastern China near the coal mines. The railways built by foreigners were built to transport coal. The coal-burning ships of the Westerners had to be supplied with fuel, and where rivers did not flow near the coal mines railways were essential to bring coal to the ships. Some railways have been built by the Japanese and some by the Russians.

CHINA HAS JUST BEGUN TO DEVELOP HER HUGE RESOURCES OF COAL AND IRON

Western engineers believe that China has within her boundaries huge deposits of coal. The circle graph of figure 202 shows that, according to their estimates, China has under her soil about 14 per cent of the coal of the world. Indeed, it is believed that China has more high-grade coal than any other country except the United States.

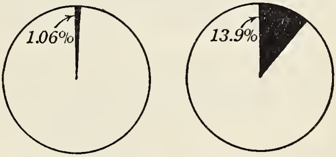

FIG. 202. The left circle graph shows the per cent of the world's coal which is produced by China. The right circle graph shows what per cent of the world's unmined coal China possesses

The *mining* of coal in China, however, is less than 20,000,000 tons a year. More than half of this very small production is still the work of companies owned or operated by foreigners.

The coal production of China is increasing, however, and it has almost doubled in the last ten years, owing chiefly to the development of a few large mines. One of these, run by both English and Chinese capital, contributes one fourth of the total production of the country. Companies owned entirely by Chinese have likewise made good progress. The Japanese also operate mines in southern Manchukuo.

The table on page 470 compares the coal mines of the Chinese with those in China owned by British and Japanese.

Iron has not been produced in China so rapidly as coal, though engineers have estimated that China has a large supply of iron ore. The modern furnaces that have recently been built turn out from 200,000 to 300,000 tons of pig iron a year, a small amount if we compare it with production in industrial countries. For example, the United States produces about 42,000,000 tons, over a hundred times as much. So far most of the iron produced in China has been produced by companies owned by foreigners.

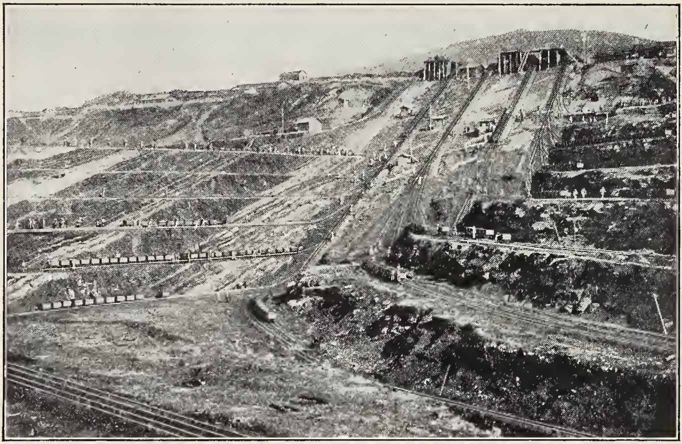

Fig. 203. The rich Fushun coal mines in Manchukuo are operated by the Japanese. (Courtesy of the South Manchuria Railway Company)

Coal Mined in China

Nationality	Capital	Tons produced in a Recent Year
Chinese . . .	$50,000,000	7,000,000
British . . .	$22,000,000	4,000,000
Japanese . .	$27,500,000	4,500,000

There are Other Minerals of Value in China

As you know, to make certain kinds of steel requires tin and antimony. Southern China has large amounts of tin. Each year China exports valuable cargoes of tin to the industrial nations.

As for *antimony, China produces nearly two thirds of the entire world's supply.* During the war, 1914–1918, when steel was being produced in greater quantities than ever before, many antimony mines were opened up in China. They have since fallen into neglect, as there is not now sufficient profit to be made from them to keep them open. Many old-fashioned people among the Chinese explain this by saying that the earth dragon was not pleased at having his back scratched by men's digging! But you may be sure that the earth dragon will be pleased to have his back scratched if there is profit to be made from the antimony mines. "New China" does not fear the earth dragon.

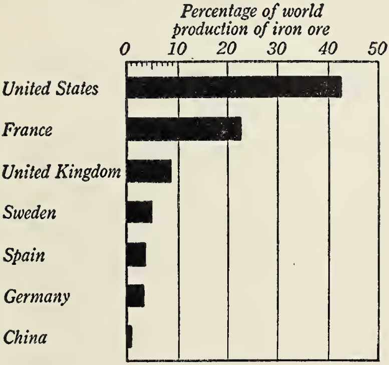

FIG. 204. Six countries of the world produce more iron ore than does China, the largest of them all

In the last few years foreigners have needed the tungsten of China, and so she has become *the world's greatest tungsten-producer.*

CHINA IS ALSO BEGINNING SLOWLY TO INTRODUCE MACHINE MANUFACTURING

Already China has begun to use machines and mechanical power in the manufacturing of cotton and silk. The Chinese began to make a little use of power machines about 1890. For 25 years, however, the progress made was very slight indeed, and it is only since the close of the World War that the industrialization of Chinese cities has moved ahead rapidly.

NUMBER OF SPINDLES IN CHINESE COTTON MILLS	
1906	400,000
1916	1,154,000
1923	2,666,000
1929	3,620,000

At first, the power looms were small ones set up in individual homes. Many knitting machines for stockings were operated in Canton. Today there are a number of modern factories in Shanghai, in Tientsin, in Harbin, and in Canton. It is estimated that in 1927 there were more than 1500 large factories besides several thousand small shops which used power machines. It is in the textile industries, as it was in the industrial countries of Europe, that the Chinese industrial revolution is beginning.

TODAY THE CHINESE THEMSELVES LEAD IN INTRODUCING INDUSTRIAL WAYS OF LIVING

The Chinese themselves own most of the textile and flour-milling factories.

In 1927 there were 160 modern flour mills in China, and they were producing upward of 115,000 barrels a day. There were 100 match factories, 16 paper mills, and 35 tanneries — all Chinese-owned.

In a recent year in Shanghai, the center of textile industry in China, there were 22 Chinese-owned cotton mills, 20 Japanese-owned cotton mills, and 5 British-owned cotton mills.

What do you think about China? Has she begun to change her old ways? Do you think that China may make great strides toward industrialization? Do you think that China can ever compete with Europe and the United States as an industrial nation? What advantages has China? What does she lack?

SUMMARY: "THE CHANGING CHINESE"

For thousands of years the people lived on in much the same way. Then came the Europeans with their industrial ways of life, and *China began to change.*

The old China was unchanging.

A new China is beginning to appear. Slowly it is learning from the West to relieve the muscles of human beings from their wearying tasks. At last, after centuries of separation from Europe and America, the Chinese are beginning to play a part in the modern industrial world.

Of course, no great advances toward industrialization have been made as yet. Most of the 400,000,000 people in the villages of China are living as we described them in the preceding chapter. For thousands of years they and their ancestors have been cultivating rice and beans and silk, building houses, making clothes, carrying things without machines and engines — living without a knowledge of what we call "science." Of course, change comes only slowly in such a huge country.

INTERESTING MAGAZINE ARTICLES FROM WHICH YOU CAN GET ADDITIONAL INFORMATION[1]

*"A Chinese Statement of the Chinese Case," *Asia*, December, 1925, pp. 1035–1038.

"China Astir against the Foreigner," *Asia*, August, 1925, pp. 652–655.

"New China and the Printed Page," *National Geographic Magazine*, June, 1927, pp. 687–722.

*"Shifting Scenes on the Stage of New China," *National Geographic Magazine*, November, 1920, pp. 423–428.

*"Special China Section," *Literary Digest*, March 12, 1927, pp. 20–91.

"The Chinese Cult of the Long Gown," *Asia*, April, 1928, pp. 261–266.

*"'The Man in the Street' in China," *National Geographic Magazine*, November, 1920, pp. 406–422.

"Why China is the 'Danger Spot of the World,'" *Literary Digest*, January 15, 1927, pp. 8–9.

*"Young Sons of Science who may remake China," *Literary Digest*, July 16, 1927, pp. 37–40.

[1] Refer to the books in the list at the close of Chapter XVIII.

UNIT X

JAPAN: AN ANCIENT ISLAND COUNTRY WHICH IS BECOMING A MODERN INDUSTRIAL NATION

JAPAN: AN ANCIENT ISLAND COUNTRY WHICH IS BECOMING A MODERN INDUSTRIAL NATION

Now we turn from the study of China to that of Japan.

It is frequently said that the Chinese and Japanese people are very much alike. In physical appearance they appear very similar.

But are they alike? Are their countrysides alike? Are their villages alike? Does the traveler in Japan see the same kind of civilization as the traveler in China? Are the Japanese engaged in simple handicrafts?

There was a time when Japan resembled China in many ways. But today Japan is fast becoming industrialized, and although more than half of her population still farm in the crude ways learned ages ago from China, there is a new and different Japan to be seen in the cities and industrial areas. That *Japan is very different from China.*

In the next two chapters we shall try to understand both the ancient and the modern Japan. In Chapter XX we shall try to get a feeling for the way of living there before 1850. We shall learn what was happening there during the centuries in which Asia was so completely cut off from Europe. In Chapter XXI we shall read of the astonishing transformation that took place among the Japanese after 1850.

CHAPTER XX

JAPAN: AN ANCIENT ISLAND COUNTRY

A study in contrasts

Our long trip across the Pacific is nearly over, and the wide blue ocean lies behind us. We get up at earliest dawn to see "the sight of our lives" — Fuji rising from the morning mists. We have read all about this mountain in our guidebook. It is a remarkable mountain, a true volcano cone, which, although it is miles inland, seems to be rising from the sea as it gradually slopes up from the coast.

Japan and Fuji? Of course! We have seen pictures of it all our lives, in books, on fans, on rice cakes. Fuji is a sort of trade mark of Japan.

We stroll out on deck and look ahead.

And we stop still, catching our breath.

For there it is — perfect, celestial. It floats upon the mists, its white snowy peak sharply vivid against the blue sky. We catch our breath again. Why has no one ever told us how different it is from any other beauty in the world? It is not *real* at all. It is too fairylike, too brightly white; it stands against a too blue sky. There never was anything like it in the world. We shall never see such a sight again.

And we stand there, hating to turn away, hoping to preserve the picture in our minds by looking a long while.

We are soon to be in Japan — the land of cherry blossoms and of bright colors. The land of beauty and of make-believe. It is going to be a wonderful excursion, this visit to the island country across the Pacific.

Yokohama! We are in the harbor. The bay is filled with boats — big gunboats and freighters. Flags of all nations flutter at the sterns. Among the big boats and gay junks, small boats with brown sails are going in and out. From them the bright-eyed people smile up at us. The scene is very foreign and picturesque.

Our boat draws up to the dock. All the picturesqueness vanishes. The noise and clatter are terrible. We might as well be in Boston or Baltimore. Warehouses surround us. Boxes and bales and the smell of sheds remind us of all the familiar industrial ports at home. We make our way down the gangplank. We are surrounded by men who try to sell us imitation and culture pearls. We didn't know there were so many pearl necklaces in the world!

Taxi-drivers are offering to hurry us to our hotel. The jinrikisha will take us just as fast, the runner who pulls it assures us. All is noise and clatter and dust and confusion, a disagreeable contrast to the beauty of the harbor.

Our first street scene shows us this same contrast between the old and the new, which is such a surprise to a visitor in Japan.

We must have Japanese money; so we go to the first bank we see, a small money-exchange where behind a window a man figures up on a wooden counting board how many *yen* (the Japanese money) we are to get for our American dollars. Down the street a fine modern bank is doing business in real Western style.

It is time for lunch. We ride in our tooting taxi to a restaurant such as we could find in the small towns of our country. But people across the street are eating their lunch kneeling on cushions before a low tray. Bright-colored Japanese vegetables are being cooked under their noses.

Yokohama is, indeed, a city of contrasts. Great steel and concrete docks jut out into the harbor. Warehouses dot the shore. Streets are macadamized. Department stores, constructed on the rectangular lines of the buildings in European and American cities, bound the main business streets. Modern hotels house travelers, buyers, and salesmen from all parts of the world.

Yet, when a great steamer with three funnels steams into the harbor for coal, there are no steam or gasoline cranes to transfer coal from the lighters to the bunkers of the ship. Instead, active Japanese women take their positions on the ladders that are run up to the ship and, faster than seems possible, pass little baskets of coal from one to another in endless-chain fashion — full baskets going up, empty ones coming down. The ship seems colossal; one wonders how such ants of beings can ever fill the hold of a twentieth-century ship with these tiny basketfuls of fuel.

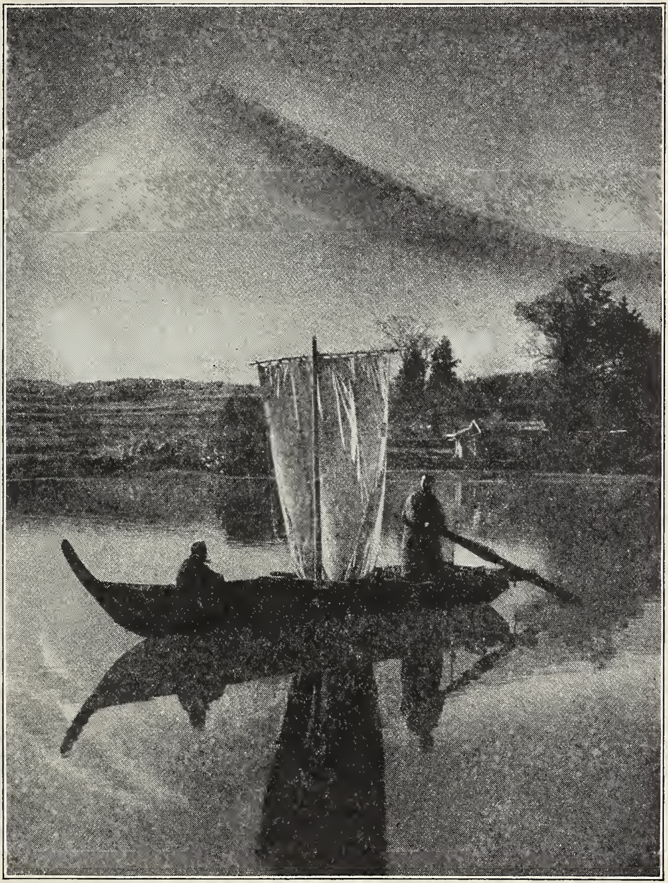

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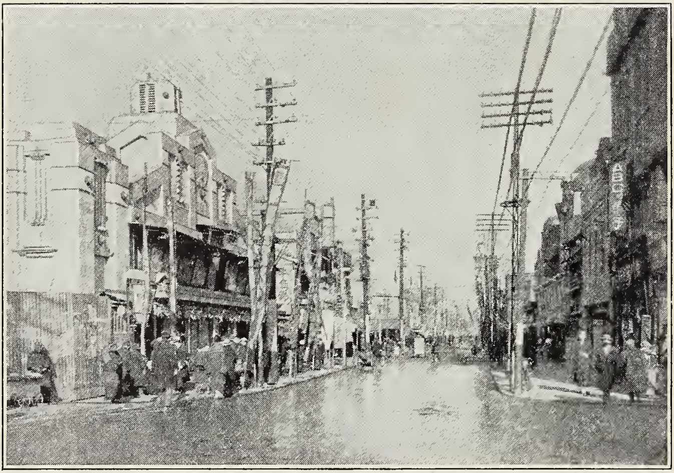
Fig. 205. Fuji, the sacred mountain of Japan, up which thousands of Japanese pilgrims climb in the summer when its slopes are bare of snow

This is a strange procedure in a city of macadam pavements, fine hotels, and many taxis, but it is only one example of the many contrasts in Japan.

There are many industrial cities in Japan today.

Fukui is a busy center, where the streets are lighted with electric lamps, the factories are run by steam power and electricity, and homes are equipped with modern appliances of all kinds.



© L. Green from Publishers' Photo Service

Fig. 206. A theater street in Yokohama

So, too, with Osaka. Fifty years ago this city was practically without a chimney, and was made up almost entirely of one-story houses. Now it is a great mass of smokestacks. Steel mills, modern shops, factories of almost every description, present to one a city fairly typical of America's industrial zone.

So sudden has been Japan's transformation that the old and the new are all mixed up

In 1850 the Japanese were a small nation of farmers, getting a very poor living by simple ways of agriculture. They were living in much the same way as the Chinese had been living throughout their history. There was hardly a machine in the islands of Japan.

In many ways it is still primitive today. On some small farms the work is being done by peasants with primitive tools. In many regions the little plots of rice, tea, and mulberry are cultivated with tender care by a painstaking system of terracing (such as you saw in figure 188), working over the soil, fertilizing, and irrigating by hand. In such regions nearly everything is done by hand with shovels, rakes, and hoes.

Yet much of this has been entirely transformed within the last half-century. A great portion of the farmers have become industrial workers. The population has increased to about 60,000,000. The wealth of the nation has multiplied rapidly.

Thus the old and the new are all mixed up in Japan. From a little island of primitive farmers it has become a crowded and powerful industrial nation. All within 75 years! How does it happen that this small island empire shows such sharp contrasts in ways of doing things? To understand it we must know what the country is like and a little of the history of the people.

A Close-up View of the Islands: what they are, their Number, and their Size

Look at the map, figure 207. Find the curved string of islands which form Japan. How many can you count, or estimate? Ten? Fifteen? If figure 207 could have been made the size of a wall map, your answer would have been quite different. *Japan contains over 3000 islands!* However, only about 600 of them are inhabited. The distance from the northern tip of the row of islands, called the Kuril or Chishima Islands, to the southernmost point on the island of Taiwan (Formosa) is about 2500 miles, almost as far as from New York to San Francisco.

Now look particularly at the larger islands, beginning in the north. Find the island of Sakhalin. The southern part of the island (below the line) belongs to Japan. South of Sakhalin is Hokkaido. Below Hokkaido you see the long island which is the center of Japanese life and government — Honshu, the main island of the group. Between the horns at the south of Honshu is Shikoku Island. Below is Kyushu Island. Through the narrow strait between Honshu Island and Kyushu Island sail most of the ships which travel between the mainland of Asia and the United States. Finally, far to the south is Taiwan. The ones we have named are the important islands; they are the islands on which most of the Japanese people live.

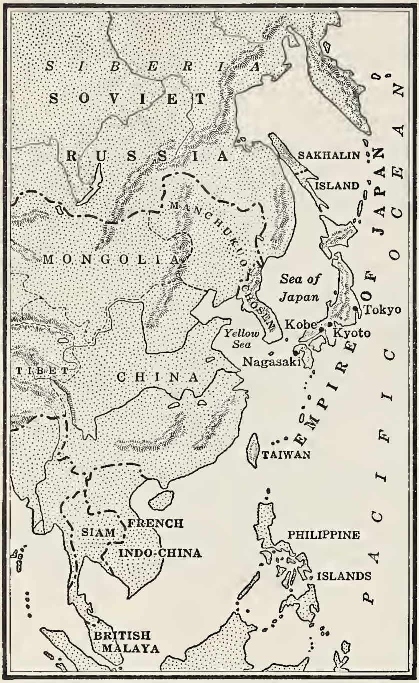

SIBERIA
SOVIET RUSSIA
SAKHALIN ISLAND
MANCHUKUO
MONGOLIA
CHOSEN
Sea of Japan
Tokyo
Kobe
Kyoto
Yellow Sea
Nagasaki
EMPIRE OF JAPAN
TIBET
CHINA
TAIWAN
PACIFIC OCEAN
FRENCH INDO-CHINA
SIAM
PHILIPPINE ISLANDS
BRITISH MALAYA

FIG. 207. The islands which comprise the country we call Japan lie off the coast of Asia

The islands of Japan are really part of the mountain range which forms the edge of the continent of Asia. The ground is so low between Japan and what we know as Asia that the ocean covers this low land. We can think of Japan, then, as being the top of a mountain range with water lying everywhere between the peaks. Imagine what an amount of coast this provides for Japan! Each part is entirely surrounded by water. A long coast and many harbors — Japan has both.

But Japan also owns a piece of the mainland of Asia. Find on the map, figure 207, the arm of the mainland which sticks out close to Japan — the region called Korea (now sometimes called Chosen[1]). So shallow is the water in Korea Strait that a little upheaval of land would connect Japan and the mainland. We shall see later how important Korea has always been in the history of Japan.

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[1] Japan has restored to Korea the ancient name "Chosen," by which it was known centuries ago; but in this book we retain the name which the peninsula has had for many years — Korea.

WHO ARE THE JAPANESE PEOPLE?

Long ago Japanese history could be recorded in only one way. Story-tellers played their musical instruments and recited tales of the valiant deeds of emperors and warriors. Some of these stories have come down to us, but like all stories which have been passed on from generation to generation by word of mouth they contain more imagination than fact. However, we can gather some of the ancient history of Japan from these tales of early days.

We first hear of the people whom we call Japanese living on the island of Kyushu. Whence they came we do not know with certainty. Perhaps, long before the time our story begins, men and women had come across the narrow strait from Korea. Perhaps some had come from other islands in the Pacific. No doubt people came from various places, and after generations of intermarrying became the people we call Japanese.

At any rate, these people from the southern islands pressed north to Honshu Island. They had to fight every mile of the way, for the native people of the island tried to keep them out. Gradually, then, these "Japanese" established themselves on the principal islands of the big chain.

The conquering people settled in the midst of great mountain forests, which they gradually cleared away to make farms.

There were craftsmen among the Japanese, men who made pottery, shields, arrows, swords, and tools — the few necessities of those ancient times. Fighting, fishing, farming, and the simple crafts occupied the men. The women spent their time spinning, weaving, caring for the silkworms, cooking, and sometimes helping to do the farm work. It was a simple life, in which there were neither great riches nor great poverty, although there were slaves. These were probably prisoners who had been taken in war. There were also serfs, bound to the warriors.

According to tradition, the Japanese have long had an emperor

Japanese historians record that the first emperor who established his capital on the main island was Jimmu. He is supposed to have become the *mikado* (the Japanese word for "emperor") in the year 660 B.C., although we are not at all sure of any of the facts about him. He is, for the most part, a mythical person. His name, Jimmu, means "Divine Valor."

This first emperor was not a ruler over a great organized empire. He was rather a sort of tribal chief, or leader of the clans. He lived much as the other people did. Historians of the Japanese report that these ancient emperors dwelt in simple huts, that their clothing was rough and made of hemp like that of their people, and that their swords and other fighting equipment were of the coarsest kind. They were very democratic, putting themselves on equal terms with their people and not even using slaves or serfs to carry their bows and arrows in fighting or hunting.

The Japanese, a seafaring people

The earliest accounts of the Japanese show that they, like the British and many other island people, were always a seafaring group. They went in and out between the islands to fish for their daily food, and some of them ventured farther away. Some Japanese historians are of the opinion that Korea was invaded by a Japanese army as early as the year 200, and that the Korean ruler swore that "until the sun rises in the west, until rivers run toward their sources, and until pebbles ascend to the sky and become stars, he will do homage and send tribute to Japan."

Whether or not such an organized invasion occurred, it is probable that Japanese traders and raiders went back and forth to the mainland from very early times.

JAPAN BORROWED A READY-MADE CIVILIZATION FROM CHINA

We have seen how simple the life of the Japanese people was during these early centuries of their history. They did not have a written language. They had no cities. There was little luxury of any kind.

But to the west of Japan was the great Chinese Empire with a language, a literature, and many books; with a highly developed philosophy and art; with beautiful temples; with flourishing agriculture, industry, and commerce.

About the end of the sixth century the Japanese rulers began to send people to China to study the teachings of Confucius and to learn Chinese ways. Some remained there for 25 or 30 years. The knowledge that these Japanese students acquired was put together later in a new body of laws, based directly on the laws of China. In the 600's a Japanese emperor established schools where people could study Chinese ideas and ways.

Meanwhile, travelers kept going back and forth, and the Japanese learned more about the great empire to the west. Chinese scholars and craftsmen began to settle in Japan. They showed the Japanese people how to make useful and beautiful objects and how to build temples. They taught them the Chinese way of writing, and the Japanese, who had not written before, began to write in the Chinese way.

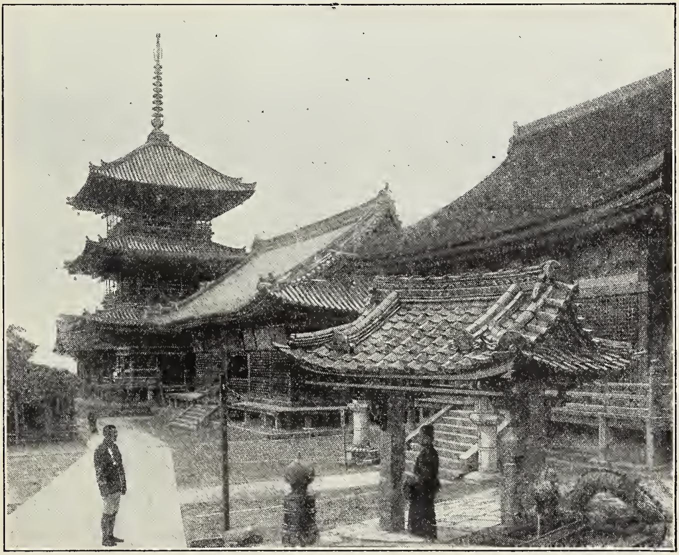

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FIG. 208. Under the influence of China the Japanese learned to build beautiful temples. The one shown above is located in Kyoto

Thus did Chinese civilization reach Japan. Today throughout Japan one sees everywhere traces of Chinese civilization — in the kind of dress people wear, in the crafts, in the buildings, and in the pictures.

Life under the Later Emperors

In the year 645 the emperor took away much power from the clans and the warrior lords of Japan and became the supreme ruler. As he took over this power he set up a new system of taxing the people. Nobles did not have to pay any taxes, but the farmers had to pay their own and enough to support all the nobles. These taxes weighed heavily on the working people and caused great suffering. This was an attempt to model the government after that of China and to concentrate all power in the hands of the Imperial Court. This system was very different from that in the old Japan, in which the mikado lived the same simple life that his people lived.

A luxurious court life grew up

In 794 the imperial government moved to Kyoto, the new capital. Kyoto was elaborately planned. It was several miles long with wide avenues running through it. Everything possible at the time was done to make it take on an air of comfort and luxury.

As time went on the court at Kyoto became ever more luxurious, and the manners of the nobles more refined. Art flourished, and as the Japanese love of beauty developed the people celebrated many festivals in connection with the seasons.

The diary of a court lady of old Japan shows a little of the life at court in 1007.

> The day of the King's visit was approaching, and the Lord's mansion was beautiful and adorned. Beautiful chrysanthemums were sought for everywhere, to plant in the garden. Some were already fading, others in yellow were especially lovely. When they were planted and I saw them through the shifting morning mists, they seemed indeed to drive away old age.
>
> The Royal dais was prepared at the west side of the Queen's. . . . Lady Saemon held the King's sword. She wore a blue-green patternless *karaginu* and shaded train with floating bands and belt of floating thread brocade dyed in dull red. Her outer robe was trimmed with five folds and was chrysanthemum-coloured. The glossy silk was of crimson; her figure and movement, when we caught a glimpse of it, was flowerlike and dignified. Lady Ben-no-Baishi held the box of the King's seals. Her *uchige* was grape-coloured, her brocaded train and *karaginu* were the same as the former lady's. She is a very small and smile-giving

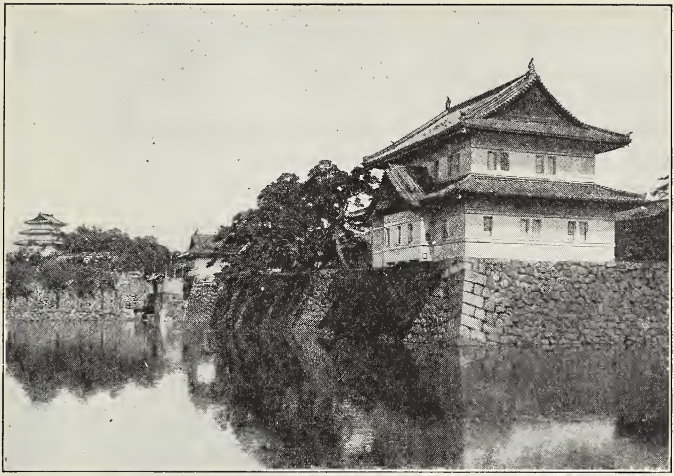

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FIG. 209. The later emperors of Japan had beautiful palaces. Part of the Imperial Palace of the later rulers at Tokyo (which succeeded Kyoto as the capital) is shown in the picture

person and seemed a little shy, and I was sorry for her. Her face and clothes were in better taste than those of the other ladies. Her hair-bands were blue-green. Her appearance suggested one of the ancient dream-maidens descended from Heaven. . . .[1]

Japanese craftsmen acquired great skill under this encouragement from the court

Under the encouragement of the court the Japanese craftsmen acquired great skill in the arts and crafts. They had made things such as swords, cloth, and shoes before, but these were the necessities of life. They now developed many new arts and crafts. They painted pictures, carved ivory, and made lovely enameled and lacquered objects. Everything the humble craftsman made was, to a certain extent, beautiful. That, of course, is not true in our modern industrial civilization, where vast quantities of goods are turned out quickly for use rather than beauty, and often with little help from human hands.

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[1] *Diaries of Court Ladies of Old Japan*, pp. 94–98. Constable & Company, Limited, London.

In the early days the Chinese had woven beautiful patterns into their cloth. The Japanese learned how to do this, too. Later the Chinese embroidered their cloth instead, but the Japanese continued to weave most of their patterns. They still do this probably better than any other people in the world.

The Japanese also worked with metals. Their swords were very fine pieces of metal work. They learned how to inlay one metal with another metal. For example, they set silver or gold designs in pieces of copper, and they inlaid lacquer with gorgeous gold patterns.

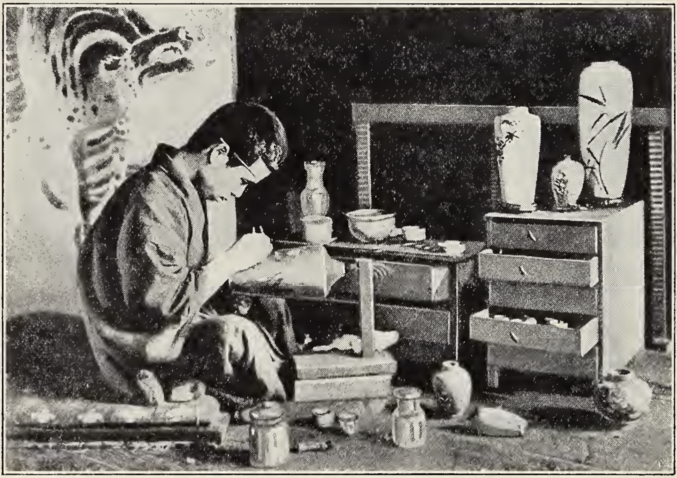

Fig. 210. Japanese craftsmanship was encouraged under the later emperors, and Japan became famed for beautiful porcelain and other handmade goods. (Courtesy of the United States Department of Commerce)

Thus luxury and beauty dwelt in the court of the emperor and in the castles of the nobles.

We must remember, however, that the court of Japan, like the court of old France, was kept up by the taxes imposed on the working people. *It was the farmers and craftsmen and traders who paid for this luxury. The greater the luxury of the court, the worse was the condition of the people.*

The Division of People into Classes

Throughout Japan's history her people have been organized much as they were in the Middle Ages in Europe. Whether mikados held the chief power of the land or not, the life of Japan has always been organized around the fighting people. In this system, bravery and strength were considered most important, and fighting was more or less the daily routine.

After the middle of the ninth century, except for a brief period, the emperor no longer exercised any power. The daimyos (war lords) were in control, and from the middle of the twelfth century the actual power rested with the great daimyo, a war lord who had overcome all his rivals. This condition lasted for seven centuries, when the emperor once more assumed control.

Not scholars, as in China, but *samurai*, or warriors, came first in Japan

The *samurai*, or fighting men, have stood at the top of society since the days when the clans conquered the islands. They were a frugal, well-disciplined people, accustomed to hardship and to self-restraint. They had certain rules by which they guided their conduct. They must not mingle with people of the lower orders, nor enjoy their amusements, such as the theater. They were always under military discipline. If, by some mistake or failure, one of the samurai did harm to his lord, he must commit suicide.

The samurai lived very frugally. They received their pay in rice, which they got from their lords' granaries. They brought up their children sternly to live up to the samurai code of honor and bravery. Every samurai boy had to face death at least once before he was grown.

This warrior class formed only about 6 per cent of the people. Below them were the three classes of workers, who supported them. First, there were the farmers, most of whom were serfs on the land of the nobles. Some of them, however, were freemen who owned their own land. Second came the artisans — smiths, carpenters, weavers, potters, and members of other crafts. The most honorable of the crafts was that of the swordsmith. Third came the commercial class, including bankers, merchants, shopkeepers, and traders.

As in China, money-making by trade was considered degrading. No matter how rich a trader might be, he ranked below the farmer and the artisan. In this the order was like that of China. The interesting contrast, though, is that of the position held by the fighter: he came last in China, but first in Japan.

At the lowest rung were the outcastes, who were hardly considered at all. They were well-diggers, garden-sweepers, straw-workers, sandal-makers, animal-tamers, and professional singers.

The discipline under which the samurai class lived was shared somewhat by all other classes

These old-time Japanese were not free to do as they pleased. They all had to obey definite and severe rules.

Each person owed absolute loyalty and obedience to his superior — each serf to his master, each samurai to his lord, and each lord to the overlord of the lords. Each was supposed to give his life, if necessary, for the one above him. Wives owed the same loyalty and obedience to their husbands, and children to their parents.

The rule of the family and the village was strict. Kindliness, unselfishness, good humor even in the face of disaster and pain, were required of every person, young and old. The fear of being sent from Japan (banishment) was held over the heads of all who did not obey these rules.

In most cases, however, the rule was not harsh.

Till the 1500's the Sea protected Japan from the Outside World

Japan had traded with China and Korea for centuries. She knew about the civilizations of these two regions, but of any other people she knew little. Surrounded on all sides by the sea, she was safe, and she was undisturbed. For over 2000 years she had nothing to fear from invaders.

The Grand Khan of China, Kublai Khan, in his efforts to rule the whole world, attempted twice to conquer Japan. That was in the thirteenth century. But both times great typhoons destroyed his boats and drowned most of his soldiers before they even reached the islands. After the second expedition, when over 100,000 of his soldiers were lost, even he became discouraged and abandoned Japan to her island seclusion.

But the sea ceased to be a barrier between people in the sixteenth century. Just as it no longer stood between China and the Western world, so it ceased to be a great barrier between the rest of the world and Japan.

European traders again!

In 1542 or 1543 some Portuguese traders were driven ashore on one of the Japanese islands. They were hospitably received by the Japanese, who were much interested in the Portuguese firearms.

News of the discovery of Japan spread among the Portuguese traders, and soon they were carrying on a lively trade, bringing goods into Japan and carrying Japanese goods to the outside world. These traders were welcomed by the Japanese warrior lords.

Soon Portuguese missionaries came with the traders. These men too were welcomed by the Japanese lords — chiefly, probably, because the Japanese wanted the traders to continue carrying goods back and forth. They were glad to get firearms, and as long as the traders and missionaries caused no trouble they let them come.

But the Spanish, Dutch, and English traders who were now scattered throughout the East were jealous of all the profitable trade which the Portuguese were carrying on with Japan. About this time a Spanish ship was shipwrecked on the coast of Japan. The Spanish pilot showed some Japanese officers a map of the world and pointed out the vast extent of the Spanish empire. When he was asked how one country gained so much territory, he said:

> Our kings begin by sending into the country they wish to conquer, missionaries, who induce the people to embrace our religion, and when they have made considerable progress troops are sent, who combine with the new Christians, and then our kings have not much trouble in accomplishing the rest.[1]

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[1] Captain Frank Brinkley, R. N., "Japan," in *Encyclopædia Britannica* (Eleventh Edition), Vol. XV.

Perhaps there was a good deal of truth in what the Spanish pilot said.

As time went on the missionaries made many converts to the Christian religion. It is sometimes said that as many as 600,000 Japanese were converted by the missionaries.

As soon as they found themselves strong, these missionaries became harsh and intolerant of others. They destroyed temples and shrines and tried to stamp out all the old religions. Not only were they intolerant, but certain groups were found to be plotting to overthrow the Japanese government with the aid of foreign soldiers.

How Japan put out the foreigners and closed her doors to the outside world

Owing to these facts, the Japanese military rulers turned against the Christian missionaries and the converts and tried to stamp out Christianity. The Christian converts rebelled against this in 1637, but they were put down with a good deal of bloodshed.

In addition, the Japanese were so angered by the behavior of the missionaries and by their attempt to gain control of the government that they drove out nearly all foreigners — traders as well as missionaries. Only the Dutch traders were permitted to remain. They had to agree, however, to stay on one small island, to hold no religious services, and to go to the main island only once a year. They consented, for the trade in silk and gold and copper was highly profitable to them.

Except for these Dutch traders on their little island, Japan cut herself off completely from the European world, and for 200 years the sea was sufficient protection against the big ships and firearms of the Western nations.

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CHAPTER XXI

JAPAN TODAY

By 1905 Japan was no longer an unvisited group of islands between the Sea of Japan and the Pacific Ocean; she was a world power. She had defeated Russia in warfare, and she had humbled China, her old teacher and model. Her statesmen went across the world to discuss world-wide affairs with Germany and France, with Great Britain and the United States. In less than 75 years a backward country of farmers had become a powerful industrial nation.

How did it happen? How did this sudden transformation come about? You have already seen what happened to China when the Western traders beat at her doors. The story of what happened in Japan is somewhat different.

In the 1850's the Western Nations beat at Japan's Doors and made her open them

One summer day in 1853, as the Japanese were going about their work as usual, a fleet of black vessels, sending smoke to the blue heavens, sailed into the harbor of Yokohama. At the sight of these "big black fire-ships of the barbarians" the Japanese people fled in panic. Perhaps their villages were to be destroyed! They had heard of the barbarian Westerners before! The strangers were to be feared, not trusted, it was said; so many people fled to the hills.

These monster ships were in reality four steam-driven war vessels from the United States. On one of them was Commodore Perry bearing a letter and gifts from the President of the United States to the Emperor of Japan. The letter asked Japan to protect American shipwrecked crews, to set aside a port at which American whalers could obtain supplies, to permit the establishment of a coaling station for American ships on some small island, and to open one or more ports to American trade.

This was the first loud knock at Japan's closed doors. What was she to do? She could not hope to keep her harbors closed to these strange smoking ships that belched fire. They came from far across the world, then disappeared, and more came after them.

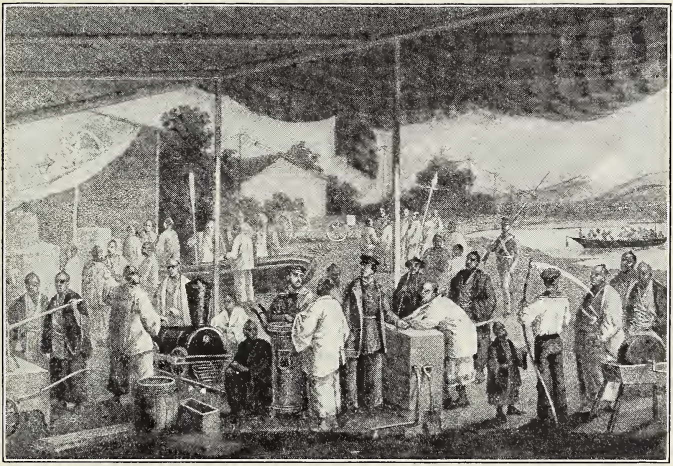

FIG. 211. Perry's arrival in Japan. Note the steam engine in the picture, a gift from the United States. (From an old print)

What good were the old Japanese forts against them? Of what good was a Japanese boat, beautiful though it might be? The strangers had powerful guns and weapons and fast boats.

SOME JAPANESE LEADERS LEARNED FROM THE WESTERNERS; OTHERS OPPOSED WESTERN WAYS

Between 1854 and 1857 Japan made treaties with the United States and several European nations. She let traders enter her ports, buy her products, and sell their wares to the Japanese people. She had permitted only Dutch traders to come before. Now she had to admit any strong gun-bearing visitor from across the sea.

The Chinese had struggled in vain against the foreigners. The leaders of Japan quickly saw that they would also be unable to hold out against them. They saw, what it took the Chinese so long to admit, that they were no match for industrial nations and that their only protection was to be like the Westerners. So they turned to learning their ways. They observed the strangers carefully. They imitated them.

The young gentlemen of Japan went abroad to Western universities and studied science and engineering. Those who stayed in Japan studied under foreign teachers and learned Western languages and philosophy and literature. Many, many schools were built, and all the children were compelled by law to go to school.

Of course, there were some Japanese people who believed that the new ways would ruin Japan. Some of the lords set up a rebellion against the new policies. Foreigners were attacked on the streets and a few were even killed.

The samurai, who were not in favor of Western ways, controlled part of the coast of Japan and from the forts fired upon foreign war vessels. What happened then to the samurai was just what happened to the Boxers in China. Great numbers of foreign vessels appeared from the sea, more than enough to destroy their forts. The samurai were defeated, and Japan had to pay $3,000,000 for their rashness.

The Japanese had always been quick in learning new ways. Now they adapted themselves to the ways of the Westerners.

As we said in the last chapter, much of the old Japanese civilization had not been her own; it had been borrowed from China. Now when European strangers came, who had more successful ways than the Chinese, the Japanese people were able with astonishing quickness to imitate them too, as they had imitated China throughout the years of her greatness.

One of the early missionaries from the West wrote about them:

> These Japanese are supremely curious — eager to be instructed in the highest degree. . . . Their spirit of curiosity is such that . . . they ask questions and argue without knowing how to make an end of it; eager to have an answer, and to communicate what they have learned to others.

JAPAN'S RESOURCES

1. Japan had one factor important for industrial development: a good climate

We have encountered one example after another of the importance of climate in determining how a people live.

Japan, like the other industrial countries, is favorably located. The islands stretch north and south over a distance of 2000 miles. They extend from 22° north latitude to 50° north latitude. The island of Sakhalin on the north has a frigid temperature like that of Greenland. Taiwan, 2500 miles south, has a hot tropical climate. The central islands, where most of the people live, are truly in the temperate area. Here occur the windstorms which are called *typhoons* in this part of the world.

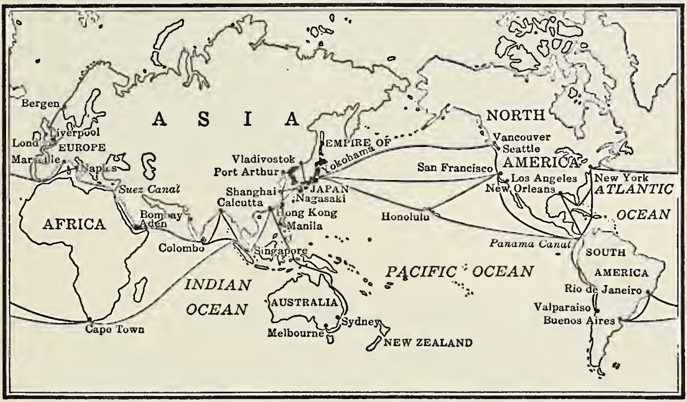
Bergen
Liverpool
London
EUROPE
Marseille
Naples
A S I A
Suez Canal
AFRICA
Bombay
Aden
Colombo
INDIAN OCEAN
Cape Town
Vladivostok
Port Arthur
Shanghai
Calcutta
EMPIRE OF JAPAN
Yokohama
Nagasaki
Hong Kong
Manila
Singapore
AUSTRALIA
Sydney
Melbourne
NEW ZEALAND
PACIFIC OCEAN
Honolulu
San Francisco
NORTH AMERICA
Vancouver
Seattle
Los Angeles
New Orleans
New York
ATLANTIC OCEAN
Panama Canal
SOUTH AMERICA
Rio de Janeiro
Valparaiso
Buenos Aires

FIG. 212. The principal Japanese trade routes are shown on the map. Japan became a world trading country later than did the United States, England, France, or Germany, but today her ships are to be met in every ocean

The typhoons are a great source of trouble as they sweep across Japan. A dozen times a year they come up from the China Sea, bringing huge waves, which wash over the coasts. These sometimes destroy whole cities. Floods sweep down the mountains, drowning people, washing farms away, and damaging the entire land.

On the whole, however, much of Japan is located in a stimulating and productive climate.

2. Are the Japanese well located to trade with other people?

Turn back to the map, figure 1. Note that within the sector including the Malay States, Japan, part of China, and India, practically 950,000,000 people are living. Now compare Japan's position on this map with her position on the trade map of figure 212. What a strategic location for reaching the important *Eastern* ports of the world! How close to the 400,000,000 people of China — and only three or four days' travel from the Philippines and other island regions of the Pacific. And what about the United States with which Japan trades to such a great extent? Fast ocean steamers now join Seattle with Yokohama. The trade of the 200,000,000 people of North and South America lies within an ocean journey of eleven days from Japan.

3. Japan has valuable power resources — coal, oil, and water power

It has been estimated that Japan has nearly 8,000,000,000 tons of coal. When one considers the size of the islands, this can be regarded as a moderately large supply. The Japanese coal fields have been worked for more than 400 years. Japan's coal occurs in small seams, however, and runs so deep in the earth that it is very expensive to mine.

There are other sources of power in Japan — petroleum and water. The more important is petroleum. Turn to the map of figure 150, on page 345. This map shows the location of the known oil reserves of the world. Has Japan a considerable amount of oil? How do her producing fields compare with those of the other parts of the world? Are they large when one considers her area and the number of her people?

One of the greatest sources of power in Japan is water. Remember that the Japanese islands are really the tops of a long range of mountains. As we have said, rainfall in the central islands is rather heavy, especially in the summer, when streams rush down the mountain sides in torrents.

This could be used to make great amounts of electrical power. In some parts of Japan it is already being done, as you can see from figure 214. In Japan water could be even a much more

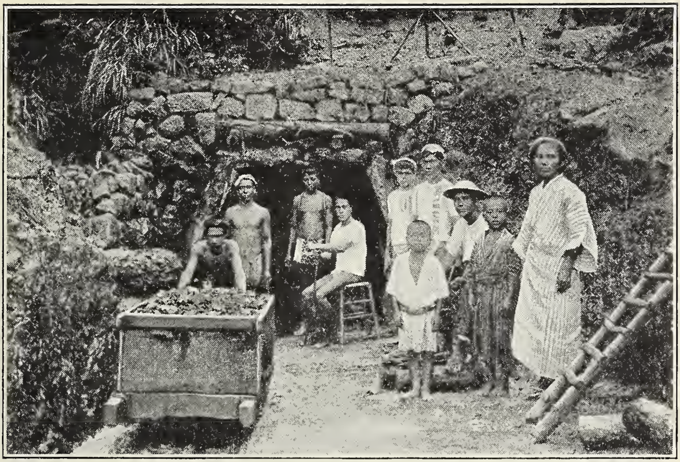

Fig. 213. The entrance to a Japanese coal mine

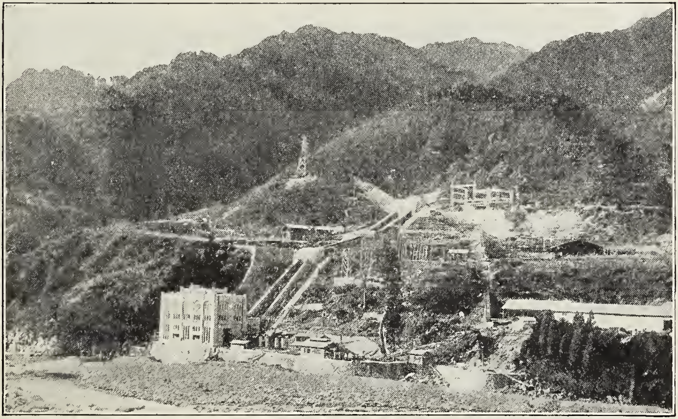

Fig. 214. A hydroelectric power station in Japan. Japan is learning to use her power resources in the Western way

important source of power than it is in the United States, for the islands are small, distances are short, and electrical power could easily be transmitted over Japan. Already when one travels about Japan he sees transmission lines all along the way, which carry the electricity into the towns and cities, and from time to time he sees power stations built in the hills.

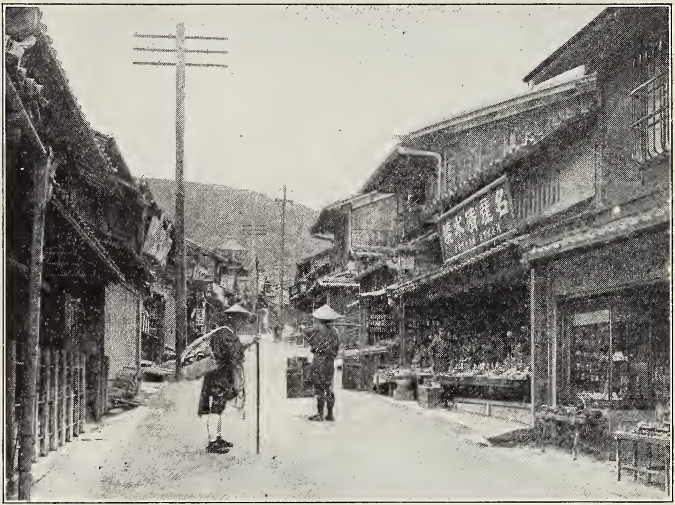
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FIG. 215. In this street in Kyoto, the shops, the signs on the shops, the people's dress, and their way of carrying things are all different from those we see in Western civilizations. The only things that remind us of an industrial civilization are the poles upon which electric wires are strung

4. Does Japan have the necessary iron and other metals with which to build up machine industries?

No detailed examples are necessary now to remind us that iron is absolutely necessary to an industrial nation. We have found that the United States, Great Britain, France, and Germany were able to adopt power manufacturing on a large scale because they were able to secure iron. Has Japan an adequate supply?

Turn to the map of figure 42. It is very clear indeed that Japan lacks iron ore. She has very little in her own soil.

To be a great industrial country she must, therefore, get her iron from elsewhere. If this is impossible, then industrial life for Japan is impossible. You have seen how England adds to her iron supply by importing it from Sweden. Is a supply of iron near enough to Japan to make it cheap enough for use?

Yes; it can be got from China, Korea, and from India, none of which is very far away, and the two first, close by.

In other minerals Japan is unusually well supplied. She is one of the leading nations of the world in the mining of copper, since she produces $50,000,000 worth a year.

She also has fairly large supplies of sulphur, zinc, lead, gold, and silver.

5. Wealthy leaders had capital to invest in the new industries

Japan has never been so truly democratic as China. There have always been certain privileged classes and powerful and wealthy lords. When the Westerners began to enter Japan, these leaders did not wait to let their country fall into the hands of the powerful industrial nations. They set to work. They took their wealth, their accumulation of capital, and put it into industries. They bought modern machinery and set up Western factories. When their young men returned from Europe as trained engineers and scientists, they put them to work developing mines, building factories, and laying railways. They borrowed large amounts of money from Western countries, however, to supplement their own capital in developing their industries.

Many of the big businesses of Japan are family affairs, which continue on from father to son, each generation adding to the capital and improving the organization. Today fifteen family groups control 30 per cent of the total business capital of Japan. There are fifteen family groups which control one industry in a great trust (such as exists in Germany). Nine of these control and operate 144 companies, with a paid-up capital of about $1,000,000,000.

One example, the rich Mitsui family, illustrates how the Japanese have kept their family groups together as they have become industrialized. The Mitsui family's business enterprises go back 300 years. In all that time a head of the family has directed the business of the family and passed it down to the next in line at his death.

In the beginning the business started in a drapery shop. In connection with the sales of this shop, the Mitsuis began to do a sort of banking. Then they became interested in foreign commerce and organized the Mitsui Bussan Kaisha, a general trading company. This company now has 21 branches in the Japanese Empire and 36 offices in foreign countries. In 1876 the Mitsui bank was established. In 1889 the Mitsuis got coal mines from the government which today produce annually one fourth of all the coal mined in the Empire. They also established a paper company and engineering works.

It is hard to know all their vast enterprises. Among other things they control docks and shipbuilding yards, cotton mills, a celluloid plant, and a radio factory.

The Mitsuis also control industries outside Japan. They are shareholders in the South Manchuria Railway, which is owned by Japanese, and they own great tracts of land in Manchukuo, where they introduced the raising of soy beans. It is they, and not the Chinese, who are responsible for this valuable agricultural product, which is now China's chief export. They own their own mills for extracting soy-bean oil and the tanks where it can be stored, at Dairen, in Manchukuo.

The industrial development of Japan is well illustrated by the history of the Mitsui family. There are three or four other merchant families that are near rivals of the Mitsuis, though none is so powerful.

JAPAN NEEDED COAL AND RAW MATERIALS IN CHINA AND KOREA; SHE REACHED OUT FOR THEM

Like other industrial countries, Japan was dependent on other regions. She lacked easily mined coal and raw materials. China and Korea, near at hand, had vast resources which Japan wanted. So the Japanese did what some of the other industrial nations did; she reached out and took the coal and raw materials she needed.

Look at the map following page 424. Notice how close the peninsulas of Korea, Shantung, and Liaotung are to Japan. Shantung and Liaotung belonged to China in 1894, and Korea was under her protection, much as Cuba is today under the protection of the United States.

It was easy to pick a quarrel with China. This Japan did, and declared war in August, 1894. The Japanese had constructed a modern army and battleships, which crushed the Chinese army and "navy" almost instantly. Within six months the Japanese were near the Chinese capital, Peking. So to make peace China gave Japan the entire Liaotung peninsula and the island of Taiwan and the Pescadores. More important still, she acknowledged the "independence" of Korea. This was Japan's first step toward seizing control of Korea.

Other countries stood in Japan's way in China

Russia, Great Britain, France, and Germany did not like Japan's seizures of land in China. Russia wanted Manchuria and the Liaotung peninsula. She also wanted to build railways across Manchuria to connect Europe with the Pacific.

So Russia, Germany, and France united and compelled Japan to give back to China the Liaotung peninsula. They said this was no more than right and that "the integrity of China should be preserved." Japan could not afford a war with these countries; so she was compelled to give back the land.

Yet three years later, in 1898, Russia leased the Liaotung peninsula, including the ports of Dairen and Port Arthur, from China for 25 years; Germany, in the same year, seized Shantung; Great Britain took Weihaiwei; and France took the Bay of Kwangchow and the islands in it.

Thus Japan was deprived of lands which she wanted on the coast and the mainland of China.

Japan defeated one of these European empires, Russia, in 1904

Japan resented having to give up land which went to her old rival, Russia. Although she could do nothing about it at the time, she prepared to settle the question later. The victory over China gave her confidence, and by laying heavy taxes on the people she got money to increase her army and navy rapidly. Finally, in 1904, Japan felt strong enough for war with Russia.

To the surprise of the world, Japan held her own against the vast Russian Empire, which had threatened to cut off her advances in China, and when peace was made she demanded that Russia withdraw from southern Manchuria, give up her lease of the Liaotung peninsula, let Japan continue her operations in Korea, and give back to Japan half of the island of Sakhalin.

In 1910 Japan took full possession of Korea

You have seen how in 1895 Japan forced China to acknowledge the independence of Korea, and how in 1905 she forced Russia to let her carry on her business in Korea. In 1910 she went further. She annexed the whole peninsula and restored its ancient name, Chosen.

Japan, like other countries, got mining and factory privileges in China

Today Japan digs more coal in China than any other country. The amount which she produces is growing fairly rapidly. For some years she has mined coal especially in Shantung, near Kiaochow, in Weihsien, Chefoo, Ichow, and Tsinan.

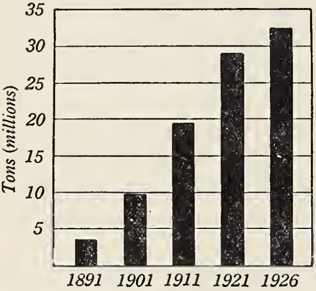

Fig. 216. The coal production of Japan. The rapid and steady increase of coal production shows how quickly Japan is becoming industrialized

The bar graph of figure 216 shows the increase in the amount of coal mined since 1891.

Although Japan is the largest miner of coal in all Asia, her coal production and consumption are very small when compared with that of the great industrial nations. Whereas the United States mines and uses more than 40 per cent of the world's coal, and Great Britain and Germany each almost one fifth of it, little Japan produces not more than 3 per cent.

As we have seen, Japan had almost no iron, and iron is very necessary in an industrial civilization. What did Japan do?

There was iron in Korea, in Manchuria, and in China. These places are not farther from Japan than the French and Swedish iron mines are from England. The map of figure 42 shows where these chief deposits lie.

So Japan took iron regions in Korea and in the Shantung peninsula, and also got permission from China to mine iron in Manchuria. The region near Hankow, China, especially the city of Hanyang, has become the "Pittsburgh of the Orient." Here, 800 miles in the interior of China, Japanese capitalists are developing great iron and steel works. In Manchuria, in Korea, and in Shantung, also, they developed valuable industrial regions.

This seizure of raw materials reminds one of most Western countries. Japan, which was an isolated group of islands in the Pacific nearly 75 years ago, has indeed learned rapidly from the Westerners. Not only has she taken up manufacturing, but in that short time she has also extended her power over other countries.

Japan built a Modern Transportation System

In old Japan travel was very difficult. Travel by water was not common as in China and Russia. Most of the roads, with the exception of three main highways, were poor, and there were almost no bridges. People traveled on foot or on pack horses or in a chair called a *kago*. Things were carried to market, as they are today in China, on the backs or heads of men and women.

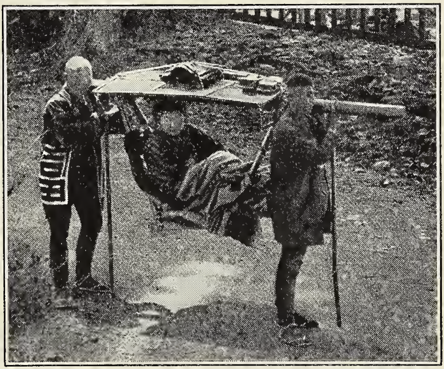

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Fig. 217. The *kago* was a popular means of transportation in "Old" Japan

This was well enough when there were no great cities and when small quantities of food and other commodities were all that people transported.

But as industries have grown up, and cities have increased to importance, Japan has developed a modern transportation system. In 1872 the first railway, eighteen miles long, was built between Tokyo and Yokohama. Today there are 12,590 miles of railway

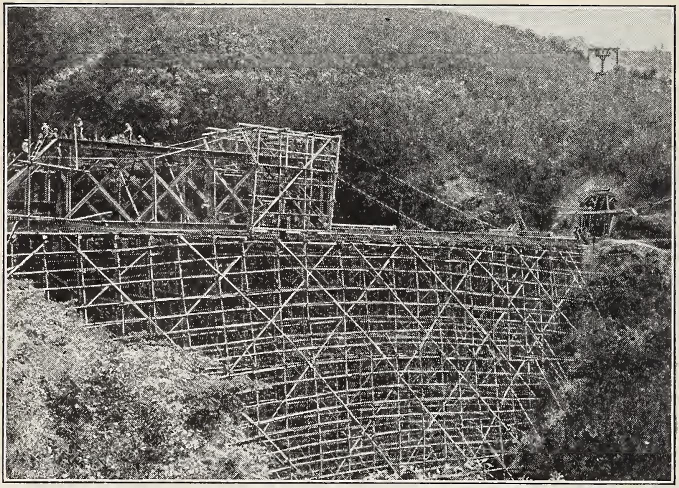

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Fig. 218. In "New" Japan railways are replacing the older methods of transportation. This steel structure is being erected to take the place of an earlier railway bridge. The picture shows how the Japanese use bamboo for scaffolding in construction work

and new lines are constantly being built. How does the length of Japan's railway system compare with that of the British Isles? Railway-building in Japan is a great engineering feat because of the mountainous country, where many bridges and tunnels are necessary (see figure 218).

As Industries have grown in Japan the Population has increased

For hundreds of years before Japan opened her ports to Western traders and went in for machine manufacturing, her population remained practically the same. But once modern industry began to take firm hold in Japan the same thing happened that had occurred in England, Germany, and the United States — the population increased rapidly. In a little over 50 years Japan has nearly doubled her population.

In 1925 she had a population of about 60,000,000 in 145,000 square miles of territory, an average of about 413 people to the square mile. That does not seem very high compared with China until you look at the relief map and notice the many mountains in Japan. There, as you know, the population will not be great. Remember that three fourths of the area of the country is mountains. Japan varies tremendously in the density of her population. Notice Japan in figure 1. In some places in Japan over 1000 people are found to the square mile!

A great part of this huge increase in population went into towns and cities. As the factories were built after 1870, the poverty-stricken people left their little farms and went into towns to work at machines. In Japan today there are 55 cities each with a population of over 50,000. There are 21 cities in each of which more than 100,000 people live. Two of these — Tokyo and Osaka — have approximately 2,000,000 inhabitants each and have become great industrial and trading centers. Englishmen call Osaka the "Manchester of Japan." It is the largest city of Japan, even larger than Tokyo, the capital.

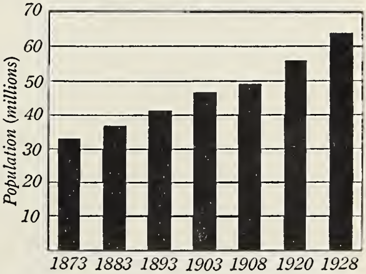

Fig. 219. The bars in this graph indicate the size of Japan's population in various years between 1873 and 1925. Notice the steady increase of the length of the bars

Table V of the Appendix gives the population of the largest cities of Japan.

How is the Growing City Population Fed?

In spite of the many people engaged in industry in Japan, more than half of the people live on tiny farms. These farms occupy only one sixth of the land area. The entire amount of land under cultivation is only one half as large as the farming land of the state of Iowa. (Each family has usually less than three acres of land from which to raise its food and to make a living. The Japanese farmers still use the old hand methods of farming which their fathers used and the ancient implements which they copied from China hundreds and hundreds of years ago.

Hardly a foot of land on the farms of Japan is allowed to go to waste. If the land is on a hillside it is carefully terraced, as it is in China. Walls are built up, making little fields for rice, tea, buckwheat, barley, or millet.

A story is told of a farmer who terraced his little hillside in no less than eleven tiers. He at last sat down on the top to rest and survey the successful results of his toil. To his dismay he could only count ten terraces below him. He counted again. Sure enough there were only ten. In haste he jumped up and counted them again. This time he found eleven. He had overlooked the top one before. He had been sitting on it.[1]

Japan gives us an excellent example of "intensive farming." Even more than the fine vegetable gardens of France, the rice fields of Japan require constant attention and handwork. Because the ground is so hilly the reapers and binders used in the American wheat fields are useless in Japan, just as they are in the Rocky Mountains.

So, in Japan, the contrast between the old way of doing and the new is most evident. Her main island, Honshu, is excellently fitted for industry, yet it is also a prosperous agricultural section. Because the climate fits so much of Japan for farming, the old agricultural life and the new industrial life provide an interesting study of two kinds of civilization going on side by side in this country.

1. Rice, the main food of the Japanese people, is the crop of greatest importance

Japan lives on rice. Over half of her cultivated land is planted in rice, and the life of her farmers revolves around the rice seasons.

Rice is grown and harvested in Japan in much the same simple ways as in China. After the rice harvest is brought in, it is threshed — often by drawing the sheaves through the teeth of a rakelike implement. In the greater part of Japan a second crop (wheat or barley) is grown between the rice crops.

The coming of each new rice year is marked by many rites and ceremonies before the new rice is planted. The protection and help of the gods is then asked in order to make the next year a good one.

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[1] Walter Weston, *The Playground of the Far East.* John Murray, London, 1918.

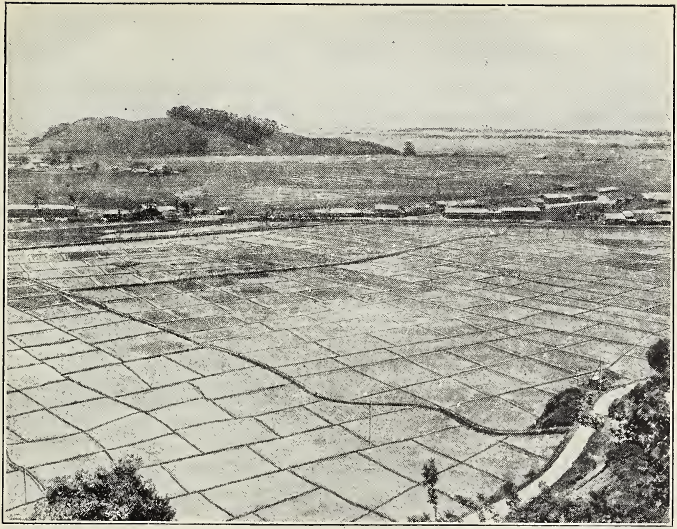

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FIG. 220. *Level* rice fields of Japan. Notice the checkerboard design. The ditches are for irrigation, and they separate one man's land from another's

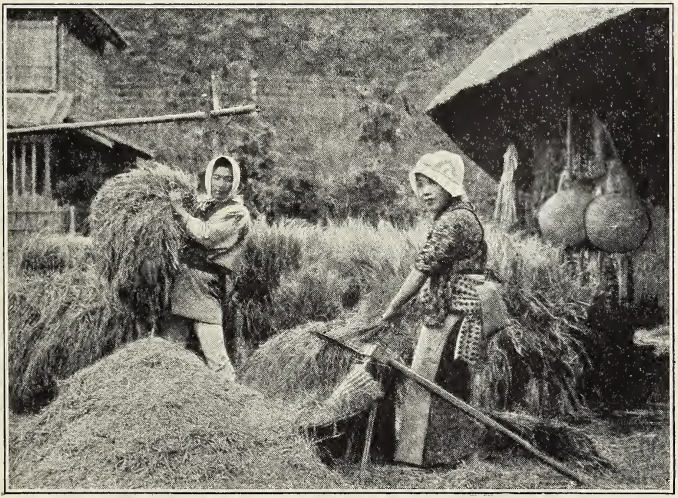

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FIG. 221. A rice harvest in Japan

Japan has other important crops. Barley and wheat are grown, but the yield of both together is less than the yield of rice. As rice is the *food* of Japan, tea is the *drink*. Hence tea is an important crop.

2. Fishing is an important industry in Japan

About 1,500,000 Japanese make a living by fishing. Their little boats go all along the coasts, in and out between the islands of the beautiful inland sea. Most of the fish caught are used in Japan. Rice, fish, and tea — these three — furnish the principal diet of Japan.

But there are canneries which prepare the meat of the large Japanese crab for export. Sharks' fins are sent to China, where they are prized as great delicacies. A bowl of shark's-fin soup is worth from two to five dollars.

3. Silk-raising is another very important occupation in Japan

Japan produces more than half of the raw silk of the world. China is responsible for less than one fourth, Italy for one tenth. These three countries produce more than 90 per cent of all the world's silk. In Japan 1,000,000 acres of land are devoted to raising mulberry trees; 2,000,000 farming families — over one third of the farming families of Japan — raise silkworms.

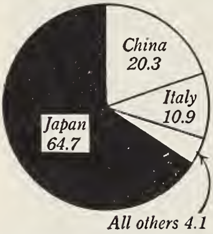

FIG. 222. This graph shows that Japan produces more than three times as much silk as any other country in the world

In the village shown in figure 223, for example, silkworms are raised in every home. There are many villages like this one, where "the honorable little gentleman" (the silkworm) is one of the most important members of the family. There are silk factories in Japan in which silk fabrics are woven by machinery, but most of the silk of the country is made by women and children in the homes of the people, especially in the homes of farmers.

From the raising of silk cocoons comes about one fifth of the income received by the Japanese people from agriculture.

THE TRADE OF JAPAN SHOWS ANOTHER CONTRAST

The tables of imports and exports given on page 512 present another contrast. Japan is shown to be a rapidly growing industrial nation. On the one hand, her greatest export is an agricultural product, silk; on the other, like France, Germany, and the United States, she manufactures many industrial products.

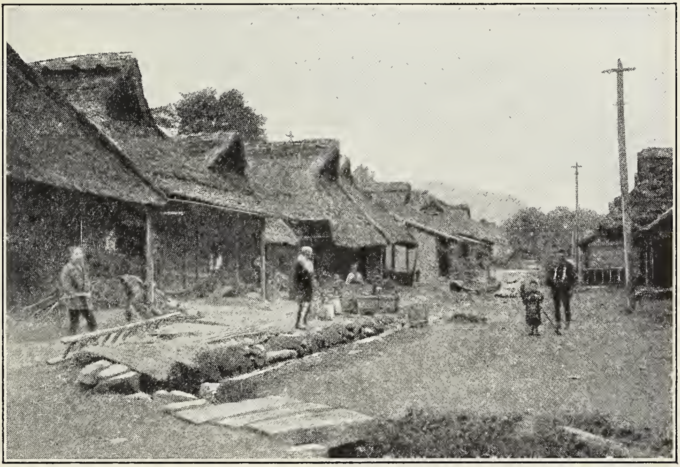

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FIG. 223. In many little towns like this, every home is a nursery for silkworms; most of the silk produced in Japan is made in the homes of the people

Japan imports huge amounts of cotton and manufactures it into cloth in her own mills. The importations of iron ore from Manchukuo and Korea are not shown separately on these lists, for Japan does not class these shipments as imports, since Korea is a part of the Empire, and the Japanese look upon Manchukuo as practically their own territory. Notice, however, that iron and steel and machinery stand high on the list of imports. Japan depends on other countries for these.

What exports head the list? Do they suggest an industrial or an agricultural country? Japan today is full of contradictions and of contrasts. In some ways she seems much like Great Britain; in other ways she seems utterly different.

Japanese Exports in 1929	Per Cent	Japanese Exports in 1929	Per Cent
United States	42.53	Philippine Islands	1.42
China	16.12	Canada	1.26
British India	9.21	Egypt	1.45
Kwangtung province	5.59	Germany	.62
Netherland India	4.05	French Indo-China	.12
Great Britain	2.94	Asiatic Russia	.70
Hongkong	2.84	Italy	.30
Australia	2.05	Belgium	.13
France	2.07	Switzerland	.03
Straits Settlements	1.29	Rest of the world	5.28

The Chief Commodities imported into Japan in 1929	Per Cent	The Chief Commodities imported into Japan in 1929	Per Cent
Cotton (ginned)	30.50	Rice and paddy	1.02
Iron and steel (including ore)	7.21	Soy beans	2.71
Oil-cake (bean)	2.92	Tissues, and manufactures of tissues	.89
Wood (cedar)	3.63	Coal	1.93
Wheat	3.19	Metal manufactures	1.03
Machinery and parts	5.46	Paper, and manufactures of paper	.80
Sheep's wool	4.59	Other imports	28.54
Sugar	1.40		
Mineral oils	4.18		

The Chief Commodities exported by Japan in 1929	Per Cent
Raw silk	37.02
Cotton tissues	19.61
Silk tissues	7.02
Cotton yarns	.62
Glass and manufacturing	.61
Drugs, chemicals, medicines, and explosives	1.64
Refined sugar	1.42
Pottery	1.75
Coal	1.10
Rest of exports	29.21

With what countries does Japan carry on most of her trade? The United States is always the best customer of Japan, while China is the second. Why?

When you remember that it was not so long ago that Japan would not permit trade with nations other than the Chinese and Dutch, her rise among the industrial nations of the world is a remarkable one. When we take into account her very small territory and her early isolation, she has advanced further in a shorter time than any other nation in the world today.

SUMMARY OF THE "GEOGRAPHY" OF ASIA

This completes our brief study of the three leading civilizations of Asia. In Chapter V we considered modes of living in India, in Chapters XVII–XIX those of China, and in Chapters XX–XXI those of Japan. These countries comprise more than 800,000,000 people — indeed, more than half of the inhabitants of the earth.

The history of these three Asiatic countries has revealed to us ancient civilizations which lived isolated from Europe for thousands of years. They had little contact even with one another. We have seen that while many modern industrial methods are often found in these countries the great proportion of the people have not been affected by them. We have learned that they still get their food by the laborious use of their own muscles. We have seen their low standard of living and the slowness and ineffectiveness of most of their transportation.

In the first half of our course we studied the four leading European countries — Great Britain, France, Germany, and Russia. The history of the first three taught us how Europeans invented machines and mechanical power and, by means of them, transformed ways of living in many parts of the world. We learned that Europe mines a large proportion of the world's coal and iron ore and makes much of the world's steel and manufactured goods. We have had many illustrations of Europe's great power as farmer, miner, manufacturer, and world trader. We saw that beyond doubt Europe has recently become the greatest single industrial and commercial region of the world.

We can now definitely compare the two kinds of civilizations — the typical European and the typical Asiatic. A sufficient number of examples have been studied so that their likenesses and differences can be understood.

First, however, we must sum up what we have learned about these civilizations of Asia. We must ask definitely how it has happened that half of the people of the modern world live without engines, machines, and factories; trains, steamboats, and automobiles; telegraphs, telephones, and radio.

To understand life in Europe we summed up the geography of Europe (chap. xiii).

To understand life in Asia we must sum up the geography of Asia. In summarizing our study of India, China, and Japan, therefore, we shall now seek answers to the same four questions that we asked about Great Britain, France, Germany, and Russia.

1. Are they located in a stimulating, productive climate?
2. Have they large amounts of fertile land and sufficient supplies of coal, oil, and water power, iron ore, and other raw materials?
3. Have they large numbers of people ready to work?
4. Have they studied their problems in a scientific way, inventing engines, machines, and efficient means of transportation and communication and ways of doing business?

I. ARE THE COUNTRIES OF ASIA LOCATED IN A STIMULATING AND PRODUCTIVE CLIMATE?

Turn to the map following page 424. Note how the continent of Asia stretches from 78° north latitude to the equator. Asia has every kind of climate, from that of the freezing arctic winters of the northland to the year-round tropical heat of the south.

Most of the people of Asia live between 20° and 40° north latitude. In fact half of all the people in the world live between these same latitudes. These dense Asiatic populations live in the moist regions of the east Asiatic coast and of the Ganges plains of India. There, in the summer, the winds blow over the farm lands direct from the ocean and bring frequent rains; hence these regions are favorable for agriculture. In them the climate is fairly even all the year round. Except in the northern part of Siberia, Japan, and China, there are few sharp seasonal changes. By working along from day to day, the people in warm regions raise enough food to live on. The climate is too good, too even, too dependable, to arouse them to great effort. It does not stimulate them to think up easier, labor-saving ways of doing things. It does not force them to change.

However, part of Asia is in the north temperate area, where the climate is much like that of northern United States. Note the location of Manchukuo, Korea, the northern section of China proper, and northern Japan.

Yet even in this region Asia did not change her ways along with changing Europe. Why?

II. HAS ASIA MUCH FERTILE LAND AND OTHER NATURAL RESOURCES?

Look at the map of Eurasia, figure 144. Note how small Europe appears in comparison with the wide stretches of territory in Asia. Europe seems to be no more than a small peninsula on the edge of Asia. Asia is approximately four times as large as Europe.

However, a great percentage of this area is waste land. Note on the map following page 424 the great stretch of northern Siberia, cold and icy most of the year; the high plateaus, cold and dry, where at best only herds can graze; the deserts of Tibet and Mongolia; and the Himalaya Mountains, the highest in the world, where steep cliffs and glaciers defy man's approach.

Much of Asia's area must be considered waste, as far as making a living for men is concerned, although there are some habitable regions around the southern and eastern edges of the continent which are larger than all of Europe. In most of these regions farming is easy, crops are bountiful (rice especially), and many people can get a living from the soil. In no other large region in the world can more crops be grown in a year; nowhere else will an acre yield more food. Not only does her fertile land produce food, but it produces also cotton, rubber, silk, and wood. Indeed, the chapters dealing with the industrial nations of Europe have all shown how Europeans have to depend on Asia for many valuable resources which Europe needs.

So, in spite of great barren stretches, Asia has a great deal of fertile land, where many people can live.

Other resources? Yes, Asia's land is rich in mineral wealth. The resources of Asia have never been fully determined, for until recently the people of Asia have not been interested in them. Western scientists have estimated some of Asia's many resources and have found them very large.

Coal and oil? Asia has large amounts of coal and oil. The bar graph of figure 69 in *An Introduction to American Civilization* shows that, next to North America, Asia has the greatest coal reserves in the world. Figure 150 in this volume shows that Asia has a large share of the world's oil, and has great oil fields which are yet untouched.

Iron? Asia has iron; not so much as Europe, but, nevertheless, a considerable amount (see figure 42).

Summing up, therefore, in area, in fertile soil, in natural resources necessary for industrial life, Asia appears to be as fortunate as Europe. While the countries of Asia are changing, — some of them slowly, some more rapidly, — the great proportion of people do not yet live as do the people of industrial nations. Why?

III. Did Asia lack People Ready to Work?

Perhaps you smile at that question, for you have encountered many examples of Asia's huge population. Lack people? With India's 319,000,000? China's 400,000,000? Little Japan's 60,000,000? Asia has twice the population of Europe and nearly nine times that of the United States.

Were these people accustomed to hard work?

Is rice-growing hard work? Remember our episodes of the raising of rice in India, in China, and in Japan, which showed the constant back-breaking effort required in this intensive hand farming.

Is the work involved in silk production hard? Remember the hours of continuous labor that were described in our paragraphs on silk and rice production.

Yes; in spite of the climate, in spite of the lack of tools and implements, these Asiatics are noted for the large amounts of products which they turn out. We can answer our question definitely. Asia certainly does not lack people ready to work. The so-called "backwardness" of that region can hardly be ascribed to that.

IV. Did the Asiatic Peoples have a Practical Interest in Science? Were they Quick to borrow Western Ideas?

We have learned that several thousand years ago the Chinese had advanced far in their "scientific" knowledge. They had invented ways of making paper and of printing. They had invented the compass. They knew how to make gunpowder. It is clear, therefore, that some of the Asiatics at least had a kind of scientific knowledge long before the Europeans.

Nevertheless, they made relatively little use of it. Between the third and fourth centuries after Christ the Chinese maritime trade along the coast of Asia was more extensive than the trade of Europe in the same years, yet China was not really a sea-trading nation. She made little use of the compass she had invented. The same was true of her invention of gunpowder, firearms, and weapons. Although evidently she had sufficient scientific knowledge, but little application was made of it.

Great works of construction were carried on, as shown by the immense buildings, the walled cities, the Great Wall of China, the Grand Canal, and other waterways. Yet so far as our records show, her scholars never invented engines. Her great engineering works were built by the effort of human and animal muscles.

The isolation of China and Japan from Europe

At the very moment when Europe was beginning to use engines, machines, railways, etc., the people of Asia continued to work and live much as they had for thousands of years. Little knowledge reached them of the strange and remarkable happenings in England, France, Germany, and the United States. For nearly 150 years the Industrial Revolution developed without any part of it being borrowed by the Chinese.

There were several reasons, of course. The desire of the rulers and people to continue doing things as their ancestors had done was one important reason. But probably the most important was that *little knowledge reached eastern Asia of what was happening in Europe*. The chief reason for that was "geography," that is, the physical isolation of Asia from Europe.

It was not so easy for people or for ideas to reach eastern Asia as it was for them to pass from one European country to another, or to cross the Atlantic. Eastern Asia was shut off from western Europe by great physical barriers.

Consider the isolation of China, for example (see map following page 424). Note the tremendous mountain barriers that separate China from the West. Note the following mountains: the Altai, the Tien Shan, the Hindu Kush, and the Kuenlun. Note furthermore that even if travelers climbed these difficult mountains they would then be compelled to cross the enormous plateau of Tibet — 1000 miles wide, 2000 miles long, and 10,000 feet high.

Furthermore, from the north the Sayan Mountains present another great natural barrier — more than 5000 feet high. Once through them, any east-bound travelers would then have to cross the terrifying Desert of Gobi — hundreds of miles of sand dunes with little or no water and almost devoid of vegetation.

China was also isolated from western Europe by the insuperable obstacle of distance. Mere distance, a barrier which cuts off a nation? Not today certainly, with our submarine telegraphs, our radio, our transcontinental express trains, our airplanes, and our huge oil-burning ocean liners.

Nevertheless, the huge distance that separated China from the place where industrialism was growing — western Europe and the United States — was a real barrier. Look at the map following page 424, again. Note that by land, even in the most direct route, it was more than 9000 miles from England and France to the densely inhabited parts of China. Note also that even today there is only one railroad line through this region, namely, the Trans-Siberian. This is the main trunk line from Moscow through Omsk, Tomsk, and Irkutsk, to Manchukuo.

And if isolation of China from Europe was great by land, what about isolation by sea? Look again at the map of figure 32. Prior to 1870 the only communication by sea that England, France, and Germany had with China was over the long route around southern Africa — nearly 15,000 miles. Furthermore, until nearly 1850 travel by sea was on slow-moving sailing vessels. Even as late as that, merchant ships were sailing from England's ports around Africa to China on round-trip voyages that required two years. So, too, from the harbors of New Bedford, Fall River, New York, and other ports in eastern United States, the square-rigged sailing vessels departed on two-year expeditions to the Orient. Communication by sea was indeed difficult. News traveled slowly. The customs and habits of one people could be transmitted to others only with the greatest difficulty.

China's isolation meant, therefore, lack of communication with the Western world. It meant lack of knowledge of the Industrial Revolution. England and the United States were using engines and machines even before 1800. They had steam railways by 1830; France, Germany, and Italy had them shortly after. But it was almost 1900 before China adopted them to any considerable extent. The United States and western Europe had telegraphs by 1850, China had very few until 1900. America and the European industrial countries used telephones widely by 1890. Even today, however, China makes use of telephones only in her largest cities.

Is it not clear, therefore, that the isolation of China and other countries of Asia thousands of miles from the center of the Industrial Revolution was one of the important reasons for the lack of industrial development?

China is merely a single example of the isolation of the eastern part of the continent. The same barriers separated Japan and India and other Asiatic countries from western Europe.

How, then, do you account for the Delay in the Industrial Revolution in Asia?

We have considered briefly the four factors which accounted for the growth of the Industrial Revolution in the United States and in western Europe — climate, natural resources, people, and scientific knowledge.

First, we found that Europe and the United States were located in a stimulating and productive climate. Much of China and Japan are located in a similar climate. Part of southeastern Asia lies, it is true, in a less stimulating climate than most of western Europe or of northern United States. Neither of these regions in Asia (except Japan) adopted the industrial ways of living until very recently. What do *you* think? Does the climate of eastern Asia account for the lack of industrial development?

Second, we found that Asia has large areas of fertile land and raises large crops of rice, millet, and other products. We found that Asia has large deposits of important minerals. Yet only Japan of the Asiatic regions took up machine manufacturing and industrial ways of living. What do *you* think? Is the delay in the Industrial Revolution in eastern Asia due to lack of natural resources?

Third, we found that huge numbers of people existed in China, people used to very hard work. What do *you* think? Is the delay of the Industrial Revolution in Asia due to the work habits of her people?

Fourth, we learned that long, long ago the people of Asia had much practical semi-scientific knowledge. Yet they turned their back on the application of it to modes of living.

Even after the Europeans succeeded in increasing their scientific knowledge and in applying it in practical invention, most of the Asiatics continued to live in their old ways. Most of them would not borrow the new industrial civilization of the West. Why?

No doubt there were many reasons. One was their habit of doing things as their ancestors had done. They had great respect for old people, old customs and habits, old things. They were suspicious of new things and feared to experiment with untried methods. This was one reason why the people of the Far East shut themselves off from western Europe. Another important reason was the physical barriers that stood between Europe and Asia.

These, then, are the points one must consider in studying the questions (1) Why did not the Industrial Revolution happen first in Asia? (2) When it did happen in Europe, why did not the people of Asia borrow it?

From your knowledge of what took place, discuss the matter with your teachers, your parents, and your schoolmates. They are important questions. They are worth much thought and discussion, even though we can now give no definite answer to them.

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UNIT XI

HOW THE HOME OF ANCIENT CIVILIZATIONS BECAME MODERN LATIN AMERICA

INTRODUCING THE STUDY OF LATIN AMERICA

To this point we have studied changing civilizations in North America, in Europe, in Asia, and even in Africa. One vast region remains to be considered, Latin America.

Latin America is the name given to the large territory extending from the southern boundary of the United States to the southern tip of South America. This tremendous territory includes the whole continent of South America and part of North America. In it nearly 100,000,000 people are living in twenty independent republics. With this region and its people the American people are carrying on a tremendous trade. Upon Latin America British and other European peoples depend for part of their living.

In our study of Latin America we shall seek to answer again the central question of our earlier studies, To what extent has European civilization spread in this region? We have seen how it spread after 1600 into other continents.

Now it remains for us to learn what has taken place in Latin America during these same centuries. In Chapter XXII we shall learn what the first Spanish explorers who landed there found. We shall discover how a continent inhabited only by Indians became the home of nearly 100,000,000 people of many races and nationalities. In Chapter XXIII we shall learn why this great territory is called a continent of contrasts. In Chapter XXIV we shall learn the kind of civilization that this unusual region has produced in recent years. We shall seek to answer such questions as What kinds of people are living there? What is their standard of living? In what kinds of communities do they live? To what extent are they dependent upon the rest of the world? To what extent is the rest of the world dependent upon them?

CHAPTER XXII

LATIN AMERICA: HOW EUROPEANS CHANGED INDIAN CIVILIZATIONS

The old world in "America," which Europeans discovered about 1500

Suppose for a moment that you are a young Spanish sailor in the early 1500's. You have heard tales from your mates of the trips of the great Italian navigator, Christopher Columbus. You can remember that when you were very, very young, the father of one of your playmates loved to tell how he made the first trip with the great sailor. All his family wept as they said good-by to him, for they felt sure that they should never, never see him again.

You remember that most people thought that this Italian was slightly crazy, and that he and his three little ships were bound for destruction. Yet did he not return, bringing with him some strange red men, whom he called *indios*, or natives of the Indies? Did he not assert that he had found the flowering Spice Islands of the East Indies far off to the west of Spain? Then did not all your friends of the seafaring trade clamor to go on voyages to this fair, rich land?

Day after day, you perch on an empty keg on the dock, dreaming of the wonderful Spice Islands. Occasionally ships come in, bringing reports of other voyages undertaken and new lands found on the other side of the earth. Sailors tell that there is a whole continent beyond the islands found by Columbus. You watch and listen eagerly. You hear your friends gossiping of lands almost "paved with gold." They say that copper-skinned people inhabit lovely lands where dark-green palm trees line a white beach washed by a sea as blue as your own Mediterranean. You almost imagine that every mountain in the new land gleams with gold in the sunlight, and that precious stones hang like blossoms from every tree.

At length your imagination is so fired that you determine that you too must be among the explorers of the New World. You long to visit these copper-skinned people, and perhaps you would like a bit of this very abundant gold.

At length your chance comes. You learn that a ship is to sail soon under a navigator called Bartolomé Ruiz. You enlist in the crew and, when the great day of departure comes, you stand on deck, looking back at Spain for a time, then turn your face to the New World.

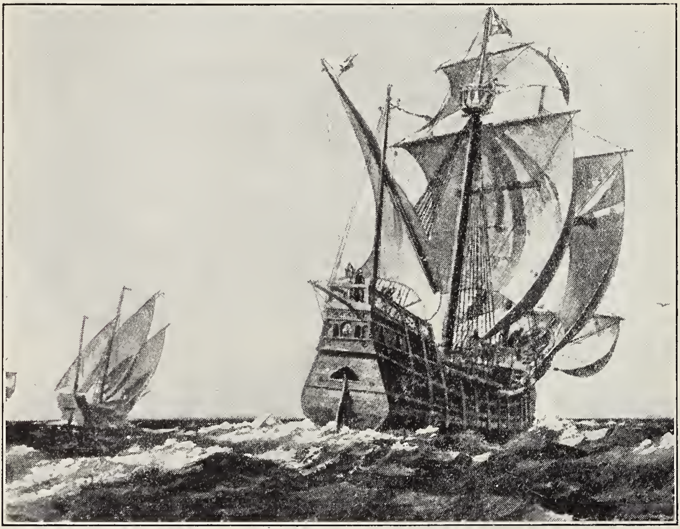

Fig. 224. Ships in the fleet of Christopher Columbus. (From a painting by M. Zeno Diemer)

After two or three months of sailing over endless waters you sight land. It is the east coast of the new continent, later to be named South America. You land and stay there for a time. Although you find the land as warm and lovely as your own Spain, and although you never tire of watching the Indians and marveling at their odd ways of living, Ruiz will not stay. He is impatient for gold. So you travel overland westward until you reach a narrow isthmus called Darien (Panama). There you find many other

Spaniards, who have made a settlement. You would like to remain for a while, but, again, Ruiz will not delay, and you move on across the mountains until you sight the great sea that was discovered a few years ago and named the Pacific.

There your captain buys a new vessel, for you were obliged to leave your good ship on the Atlantic coast. For several days you sail southward, never losing sight of land. After several days more of sailing Ruiz plans to land on a small island, but as the ship draws near it is evident that the natives are unfriendly. Ruiz remarks that undoubtedly tales have reached them of the Spanish *conquistadores* ("conquerors"). There is nothing to do but to continue south. At length the lookout reports that there is a bay ahead. Ruiz orders the ship into the bay, and as you draw near you see a great throng of natives who show no fear or hostility, only wonder. The ship glides smoothly into the crystal waters of the harbor. You go ashore, and the copper-skinned men tell you by signs that they believe that you and your companions are the fair gods whose descent from the skies has long been foretold.

Once more you set sail, however, for Ruiz has not yet satisfied his hunger for new lands, and you have not yet found gold. Again you sail the deep sea, but before long you are amazed at the sight of another vessel. It looks like a caravel of considerable size. You run to tell Ruiz. He is astonished at the appearance of a ship, for he feels certain that no Spaniard has ever yet sighted this land or sailed this sea. As the two vessels draw nearer and nearer, the crew on your ship crowd forward. The bark is indeed a large one, with two masts erected in the middle bearing a large square sail. As the distance between your ship and the strange vessel narrows you are amazed to notice that the passengers are Indians, both men and women.

Some of them wear rich ornaments of gold and silver, and some are carrying precious articles with them. They are clothed in bright-colored garments of fine woolen cloth, beautifully embroidered with figures of birds and flowers. In the boat are a pair of balances with which the Indians weigh their precious metals.

One of the sailors who can best understand Indian sign language learns from two of the strangers that close by there are fields where wool-bearing animals graze in great flocks and that gold and silver are almost as common as wood in the palaces of their emperor. As the message is repeated you glance at your companions. They are trembling with excitement. Their eyes are gleaming with longing to possess some of this precious metal. Your own cheeks burn as you think of the treasure awaiting your shipmates on shore. This new world is a magic world, and you are thrice fortunate to be one of those chosen to be its first visitors from Spain.[1]

The Old Civilizations of the "New World"

1. The Maya Indians

No ship had ever been all around the world in the 1400's. Uneducated people did not even know that the world was round; they thought it was flat and that if they sailed too far in their ships they would drop off. America seemed like a new world to people from Europe. They had not even imagined that there were these lands to the west.

Although the navigators of the 1500's called America the New World, it was really a very old world, with some very old civilizations. There were 10,000,000 Indians scattered over the two Americas in many tribes.

Some of them were wild, warlike tribes, like those of North America. Others had learned to live in more settled ways;

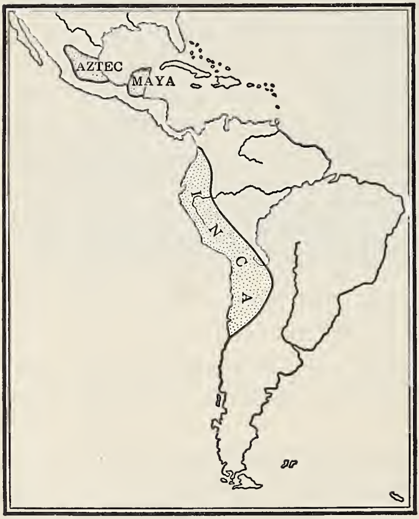

Fig. 225. What we know as Latin America today contained three civilizations which were already ancient before Europeans discovered the New World. The map shows where these people lived

they planted and cultivated grains, lived in cities, and were organized under leaders or emperors, some of whom lived in great splendor.

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[1] The facts used in this episode are from William H. Prescott's *Conquest of Peru* (J. B. Lippincott Company, Philadelphia, 1864), Vol. I, pp. 243 ff.

Modern scientists have discovered in some parts of Mexico and Central America the relics of fine stone cities, astronomical observatories, splendid temples, and government palaces.

No one knows exactly how old these ruins are, although some of our ablest archæologists have been able to estimate very closely the age of this remarkable old civilization. The earliest date that can now be fixed is August 6, 613 B. C. Dr. Spinden, of the Peabody Museum of Harvard University, has proved that "that was when these ancient Americans began to give each day its consecutive number and to keep a close tabulation of celestial events."

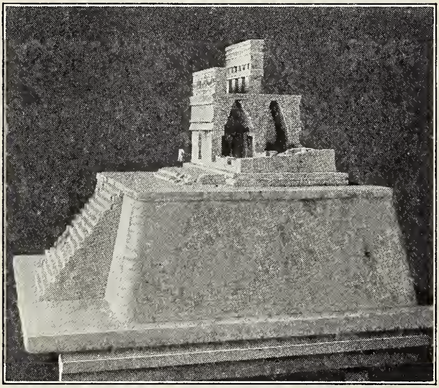

FIG. 226. A model of a stone building of the Mayan civilization. The great stone blocks remind one of the pyramids, constructed by another ancient civilization. (Courtesy of the American Museum of Natural History, New York)

We can be sure that the Mayas, as these Indians called themselves, were living there hundreds, perhaps thousands, of years before that. Remember, therefore, that the Mayas had developed their civilization to such a high point that they had astronomical observatories, a system of writing, and well-organized governments long before 1492. They knew how to carve stone, to weave fine cloth, to make lovely things in pottery, and to make fine jewelry and feather ornaments. All these things they had learned much as the people of Assyria or of Egypt had, back in the days when Rome and Greece had still to develop their greater civilizations.

The New World! The Old World! Which world do you think was the old? Which the new?

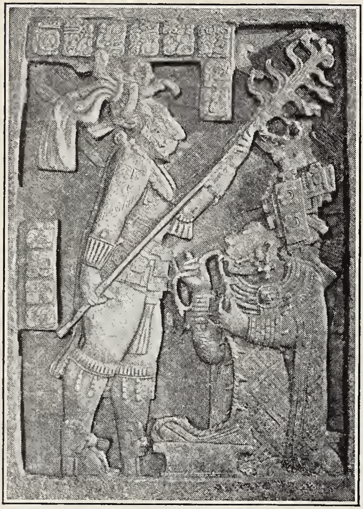

FIG. 227. An example of Mayan stone carving. (Courtesy of the American Museum of Natural History, New York)

Here, then, was another form of civilization, many thousands of miles away from the seat of ancient civilizations in Asia. Here was another people, who, so far as the experts can find, were unconnected with the people who began the civilizations in Eurasia and in Africa.

Where this Mayan civilization began we do not know. Some scientists think it was in the mountainous region of what is now called Mexico. But no matter where it began, it is true that these Maya Indians lived in fine stone cities situated in the high mountains and even in the low jungles, between northern Mexico and Honduras. And this was at a time when most Europeans were living under very primitive conditions.

2. The Aztec Indians

The Mayan civilization was only one of several ancient forms of Indian life in southern Mexico and Central America and South America. Historians and archæologists have known for a long time of the existence of other important Indian civilizations. One of the most important of these was that of the Aztecs, a warlike Indian group located farther north in Mexico than the Mayas.

When in the 1500's the Spanish adventurers sailed over to Mexico from the West Indies they found there the Aztecs, a nation with armies, official administrators, courts of justice, a well-developed system of agriculture, and skilled workers in the mechanical arts. The Aztec rulers and feudal lords lived in buildings of stone. Next to them in power were the rich merchants. A great deal of trade went on within the empire. Caravans brought goods from great distances, each city had vast market squares, and money was used in exchange for goods.

As in Europe and Asia, the common people among the Aztecs had to work very hard. They were heavily taxed by the emperors. There were many slaves among them who, under severe driving, furnished muscle power. Most of them were prisoners who had been taken in war with neighboring peoples.

All the boys were trained to fight. When a boy was still a baby, he received a toy shield and a bow and arrow. Each girl received a toy spindle and distaff. The work of the women was to weave garments of fine cotton and to take care of the household. The men lived by fighting.

3. The Inca Indians

There was a third well-developed civilization that the Spaniards encountered in the New World, that of the Inca Indians. It was farther south than the other two, down in the Andes Mountains in South America. Of course there were others off in unexplored parts, but the only advanced civilizations with which the Spanish explorers came in contact were these three.

The land of the Incas extended along the Pacific coast from what is now Ecuador south to include Peru and northern Chile. It also included the western part of Bolivia and the northwestern section of Argentina.

The Incas were not such great traders as the Aztecs. Neither did they have money with which to buy and sell easily. When they wanted to trade they exchanged goods by barter.

It was a farming civilization in which nearly all the people worked together upon the land and all shared alike in the harvest. One part of the harvest went into great granaries, where it was stored against possible warfare or drought. A small part went to the sick or crippled — those who could not work. The rest was for the village. The farmers shared alike in this division. A portion was taken as a tax for the Inca, or ruler, and for the Sun, which was worshiped as a god.

A few craftsmen were kept at work, making ornaments and vessels for the Incas and for the temples, or Houses of the Sun. Such beautiful things belonged only to the gods or to the rulers and their relatives. Only the rulers were allowed to have things made of gold and of silver. They alone had the emeralds and other jewels.

But although most of the people lived very simply, the civilization of the Incas was in some ways more highly developed than that of the Aztecs. Historians tell us that the people were not so cruel, the government not so oppressive, that there were excellent roads throughout the land, and that bridges of rope made from tough young saplings hung over the deep gorges of the mountains. Water was led by aqueducts from the mountains to the plains. When rainfall was scant the fields were watered by a system of irrigation.

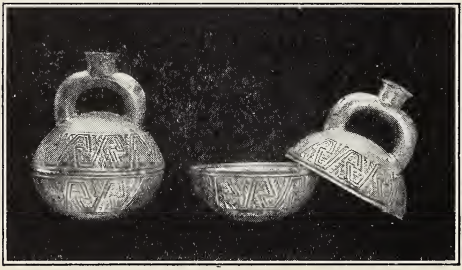

Fig. 228. Beautifully designed vessels were to be found in the rich land of the Incas. (Courtesy of the American Museum of Natural History, New York)

The Incas had a system of weights and measures. They kept accurate records by means of knotted strings, on which each knot stood for a certain number, and it was possible to add and subtract large sums by arranging the knots in different orders. A census of all the population was taken at intervals, so that the taxes could be reckoned.

The capital of the empire, at Cusco in Peru, was adorned with many beautiful temples made with great blocks of stone so carefully cut and fitted together that it was difficult to insert the blade of a knife between them.

We do not know with what tools the palaces and city walls were built, but since the Incas knew how to combine copper and tin to form bronze, a very hard metal, it was probably with tools of this alloy that they hewed the great blocks of porphyry and granite. Their weapons and knives, however, were of stone.

The only beasts of burden that they had were llamas, which they had tamed to work for them. There were no horses in the Americas till Europeans brought them. Almost the only kind of power available was human muscle power.

The Spanish and Portuguese Adventurers of the 1500's plundered the Gold of Mexico and Central America and South America, and enslaved the Indian People

In Europe tales of the vast riches to be found in the New World grew to dazzling proportions. To have heard the sailors talk you would have thought every mountain was of gold, and that rubies and emeralds dripped like dew from every bush. There were even supposed to be magic fountains which made old people young again.

The Spaniards went to South America in the 1500's as fortune-hunters — for wealth, for loot, and for a triumphal return to Spain to live a life of luxury.

Between 1503 and 1580 the Spanish conquerors came with their fighting vessels and their armed men and seized the lands of the Indians all the way from Mexico to Chile. They subdued the Aztecs. They conquered the Incas. Though hospitably received by the Inca ruler, they captured and later killed him. By 1580 the Spaniards had explored and plundered a vast region. From what is now Mexico, down through Ecuador, Peru, Bolivia, Chile, and great areas of Argentina, they pressed their way, always after fabulous fortunes and cargoes of gold.[1]

While the Spaniards were busy in the northern and western parts of Latin America, Portuguese explorers and freebooters were conquering the great coast land of Brazil on the east coast and farther south. They established colonies as early as 1532, and in a few years divided the whole coast of what is now Brazil into twelve "captaincies."

In short, before the English had established their colonies on the Virginia (1607) and Massachusetts (1620) shores there were thousands of Spaniards and Portuguese ruling a huge empire in the New World. This empire extended not only over most of South America and up through Mexico, but even into parts of North America now included in the United States. In California, Texas, and Florida can be seen today the old forts and missions of the Spanish settlements. For 200 years — indeed until after 1800 — Spain and Portugal controlled this huge region as rulers over the subject Indian peoples.

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[1] The story of all this is in Prescott's *Conquest of Peru* and *Conquest of Mexico.* These books can be found in almost any library. The story they tell of conquest and adventure is an interesting account of how empires grew in the 1500's and 1600's.

It is important to remember that the Spaniards and Portuguese who settled Central America and South America in the 1600's and 1700's lived a very different kind of life from that of the European settlers in North America.

The European colonists who settled our own country were primarily farmers, at least until after 1850. The Spaniards came not for agriculture but for precious metals. They dug in the ground for these. They hunted for them in the homes and public buildings of the Indian people they conquered. They plundered the Indian temples. They seized the Indian gold and silver mines. Peru, Bolivia, Colombia, and Mexico were the richest treasure houses on the earth, and it is estimated that even as early as 1700 the Spanish took between $30,000,000 and $40,000,000 worth of silver a year from these mines. They enslaved the native Indians and made them dig out the metals.

LATER EUROPEANS CAME TO LATIN AMERICA FOR BUSINESS

Until the 1600's the Spaniards kept all other Europeans away from Latin America. The French sea captains and the English sailors kept out of their ports.

Not that a Spanish shipful of gold was safe on the seas! Far from it. Though the ships usually traveled in groups for safety's sake, they did not always get past pirates who waited for them on the high seas; often a bold French or English ship captured the booty. But it was seldom, indeed, that other countries disputed Spain's rights on the land.

In the 1700's, however, Spain lost the power to prevent other countries from entering South America and Central America. The Spanish rulers had spent gold so extravagantly and their country had become involved in so many expensive wars that Spain was forced to borrow more than she could repay. Italian and German bankers, to whom Spain owed these sums, demanded land grants in the New World instead of money, and Spain had to give them.

In 1728 two German banking houses made a contract with the king of Spain to import negro slaves and German miners into Latin America. The miners were to aid and instruct the Spaniards in developing the mines. For nearly 200 years the surface metal had been dug; now it had about given out. The Indian laborers who worked for the Spanish knew only how to get the gold and silver from the surface, but the German miners knew how to dig deeper. The negroes whom they brought were better able to stand work in the mines than the Indians had been. Moreover, many Indians had died of hard labor and disease under the rule of the Spaniards, and the labor supply was running so low that it paid to bring negroes all the way from Africa.

The Europeans learned more about Agriculture from the Indians of South America

Long before the Spaniards found them the Indians had learned how to plant and raise certain crops which people in other parts of the world did not know about. They had learned how to plant corn (maize). This knowledge was passed around from tribe to tribe and spread all through North America and South America. The Europeans learned it from the Indians.

The Mayas also knew how to raise sweet potatoes, white potatoes (that is, "Irish" potatoes), squash, pumpkins, cacao, tomatoes, peanuts, tobacco, quinine, and rubber.

So the Spaniards found not only gold and silver but also many new kinds of food and other agricultural products. After the richest deposits of gold and silver had been taken, the Spaniards and Portuguese settled and developed large farms and ranches. They spread the knowledge of the new crops in Europe, and people began to plant them in large amounts. For example, Europe today is the world's great potato region.

The Indians taught the Europeans how to raise cotton, henequen (or sisal hemp), and other fiber plants. The importance of cotton had been known for centuries, but the Spaniards had never grown it in their own land. Sisal hemp was not important at the time, but it became so after the Industrial Revolution. Sisal fiber is the only thing known which can be used successfully for binding twine. As you learned in *An Introduction to American Civilization,* without it reaping machines would be unable to tie wheat into neat bundles, and much of the work of the great harvesting machines would be impossible.

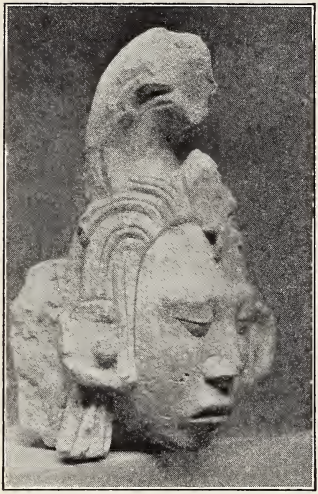

FIG. 229. The god of maize of the South American Indians. (Photograph by Professor Clarence R. Kennedy, Smith College. Courtesy of the Peabody Museum, Cambridge)

The Indians also used the product of the rubber plants long before the Europeans discovered them. One of their tribes was called *Olmeca,* "the rubber people." Dr. Spinden tells of a record from Guatemala, dated 1540, which speaks of "rubber, whose profitable uses the Spaniards took from this province, where the people were much given to varnishing boots, capes, and other useful objects to make them waterproof and to make tennis balls."[1]

What an important contribution the Indians made to the Western civilizations with their foods and fibers and other plants!

IN 1800 LATIN AMERICA WAS A MIXTURE OF PEOPLE LIVING UNDER TWO GREAT EMPIRES

By 1790 all the newly discovered land from Mexico south to Cape Horn was claimed by two small European nations, Spain and Portugal.[2] The map of figure 230 shows which part of the region belonged to each of these countries. Rulers were sent by the kings of Spain and Portugal to govern these huge territories.[1] Here, in Latin America, each governor ruled a territory many times larger than that of the home country itself.

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[1] *Scientific American,* April, 1928, p. 332.

[2] Spain also claimed great tracts north of Mexico, but in this volume we are concerned only with those countries which adopted her civilization.

In these lands there was a strange assortment of peoples — a mixture of Indians, Negroes, and Europeans. Most of the people were Indians, some of whom, under the rule of the Europeans, lived a sort of semisettled life and carried on a crude kind of agriculture. In the mountains all the way from Central Mexico to Peru were the remains of highly civilized peoples like the Aztecs and the Incas.

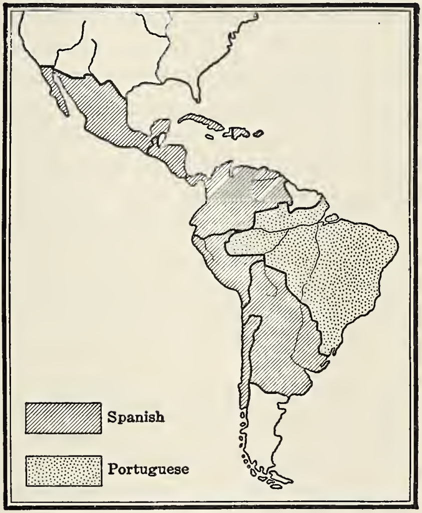

FIG. 230. By 1790 Spain and Portugal had divided between them all the land of the New World which has been shaded on the map

But the old civilizations had been almost destroyed, and the descendants of the once proud races had sunk very low under Spanish and Portuguese rule. People who had once been free were little more than slaves. Their proud spirit was broken. Furthermore, the Negroes who had been brought from Africa had intermarried with the Indians, Spaniards, and Portuguese and had produced all sorts of mixed peoples.

Most of the Spaniards and Portuguese themselves had not brought wives with them from Europe as had the British, Dutch, and Swedes who settled North America. The result in Latin America was a mixture of people and races, for the white men married women of other races.

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[1] Because it was governed so long by Latin people, — Spanish and Portuguese, — who introduced their customs and languages, we will speak of all this territory from the northern border of Mexico to the southern tip of South America as Latin America.

We do not know how many people there were in the huge lands controlled by Spain in 1783. It is believed that there were more than 12,000,000 and probably less than 20,000,000. How many of these were whites? Again we have no sure knowledge, because the census was never taken. But it is doubtful if there were more than 3,000,000 or 4,000,000 white people in this entire region.

The Portuguese controlled Brazil. The mixture of people in Brazil was much like that in the Spanish possessions. It is estimated that in 1783 there were in Brazil probably 3,000,000 inhabitants. These included all the races — Indians, Negroes, European whites, and the mixtures of Indian and white, Negro and white, Indian and Negro, plus many other combinations. Probably there were between 15,000,000 and 25,000,000 people in all the continent. Yet how vast was the continent!

THE COLONIES OF LATIN AMERICA WERE THUS VERY DIFFERENT FROM THOSE IN NORTH AMERICA

It is strange to think that in a continent where there were thousands upon thousands of miles of unexplored land there was not a good living for everybody. But such was the case.

The Spanish lords owned domains so large that often they never saw the outlying parts of their estates. They had at their command a great number of people to work for them. They raised remarkable crops and vast numbers of horses (which they had introduced into the country), cattle, and sheep. Their great estates became even more valuable than the mines they had once dug so eagerly.

The Spaniards did not work; it was the peons, or peasants, who produced the valuable crops on the farms and who dug the mines. They were not actually slaves, however. The Negroes were the slaves. The peons were, like the serfs of the Middle Ages, neither slaves nor free men. They lived on the outskirts of the Spanish estates on little plots of poor land, in huts of mud or grass. They received very small wages and were little more than beasts of burden. Thus, though the continent was sparsely settled and though great areas were still unexplored, many people were living in miserable conditions.

Until the 1800's this great system of landlords and servants flourished in Latin America. It was far from the center of the Western world in Europe. It was a world off by itself, almost as removed from the changing events in Europe as Japan or China. Travel was difficult, communication was slow, and people had little means of keeping in touch with the outside world or even with one another. It was as if the people of Latin America were in a back yard, fenced off with tall boards, beyond which they could not see the exciting events in the world beyond. In this way the old rule kept up in South America even after the Spanish and Portuguese rulers at home lost most of their power.

Between 1810 and 1826 the People revolted against Spain and Portugal and established Many Little Independent Republics

The period between 1775 and 1800 was a time of revolutions both in Europe and in North America. The American colonies rebelled against England between 1775 and 1783 and formed our own country, the United States of America. The French common people also revolted against their rulers and in 1792 formed a republic with a more democratic government. Ideals of liberty for all men were spreading throughout the Western countries.

The Spanish governors, fearing that news of events in North America and in France would start revolutions in their own colonies, tried to keep the news from their people. Newspaper articles referring to them were barred out, and in many other ways word of the new rebellions was kept from the people.

In spite of their efforts, however, the news spread. European and American newspapers wrapped around cheese, fish, and other things were smuggled in. French translations of the American Declaration of Independence found their way into Spanish America. Travelers who had visited the United States returned with thrilling stories of the new government. Steadily the spirit of revolution spread among the Spanish Americans.

By 1810 the Spanish government was in serious difficulties. The king had been put off the throne, and the government was in the hands of a foreign ruler. The Spanish people would not accept the new ruler. It was a time of great unrest, and a period in which the power of the Spanish government was very weak.

The leaders of the people of Latin America saw the difficulties their masters were facing and felt that it was their time to strike for independence. In 1810 revolutions began in widely separated parts of Latin America — in Mexico, in Venezuela, and in Argentina. Gradually the people of other regions joined the revolutionary bands.

Three men led the revolt — three men who are remembered in South America as heroes of the revolution — Miranda and Bolivar of Venezuela, and San Martín of Argentina. Miranda was the great pioneer, the leader under whom the people of Venezuela threw off the rule of the Spaniards. Bolivar also helped to free his native land of Venezuela, but his services helped to free other parts of Latin America as well, especially Colombia, Ecuador, Bolivia, and Peru. San Martín led the revolt in Chile, and as it spread he aided the Peruvians also.

These revolutions went on in several regions at once. The leaders of one region helped those of another. They became even international and intercontinental, for lovers of political freedom in European countries went to Latin America and helped the leaders of the revolution both on land and on sea.

For sixteen years the fighting went on. Finally, by 1826, Spain's governors were driven out of both North America and South America. Cuba and Puerto Rico alone remained loyal to Spain.

As a result of these revolutions eight new independent states arose — Paraguay, the United Provinces of the River Plata (which later became Argentina), Chile, Great Colombia (which later split into Ecuador and Colombia), Peru, Bolivia, Mexico, and the Central American Federation. Mexico has maintained its independence to the present time. The Central American Federation, however, held together for only twelve years. In 1838 it split up into five little independent republics — Guatemala, Honduras, Nicaragua, El Salvador, and Costa Rica. One other little republic was added to the list. In 1884 Santo Domingo became the Dominican Republic.

So much for the break-up of the great Spanish empire in Latin America. What about the Portuguese empire of Brazil?

The history of Brazil is very different from that of the Spanish republics. Brazil was by far the largest of the Latin American states. It had been a Portuguese possession since the early 1500's. The people there spoke Portuguese and were subjects of the king of Portugal. But for many years they had been dissatisfied with his rule.

Portugal, fearing that Brazil might join the revolution of the Spanish countries, made great efforts to hold Brazil by making it a joint kingdom with the mother land. The son of the king of Portugal himself, seeing that there was trouble brewing in Brazil, decided to separate from his father's kingdom. Accordingly, in 1822 he proclaimed himself Emperor of Brazil and established a fairly liberal constitution. Thus a kind of "revolution" took place without bloodshed.

Brazil started on its new life with very good prospects of becoming a peaceful kingdom. For nearly 70 years the independent empire continued. Steadily, however, the democratic spirit grew. Dissatisfaction with the emperors spread among the Brazilian people. Steadily the leaders of the people got more power. Finally, in 1889 they were strong enough to expel the royal family. At last Brazil too was a republic.

A Long Period of Tyrants followed the Revolutions of 1810–1826

After 1826, when the eight new independent Spanish republics were formed, there was no end of trouble. The revolutions had by no means settled the difficulties of the people of South America, who were not ready to rule themselves successfully. Various kinds of governments were tried with little success. The result was many civil wars and revolutions within the various countries.

In several of the countries of South America and Central America a temporary solution was found by the establishment of "dictatorships." A dictator is an absolute ruler who takes the entire government into his hands. Within the past 100 years the 20 republics of Latin America have frequently been ruled by dictators. During these times the government was in the hands of a single man and his loyal soldiers. When this occurred the people frequently lived in as great terror for their lives as they had under Spanish rule.

In more recent years, however, dictators have been overthrown by uprisings of the people. A larger proportion of the people have received education, and the governments have become more representative of the people themselves. The spirit of democracy is slowly spreading, and the period of rule by dictators appears to be about ended in Latin America.

Some people have had the dream that the republics of South America and Central America would join together in a sort of "United States of Latin America" under one central republican government. The idea has been suggested by the success of our own 48 states in maintaining a unified representative government — the United States of America. Thus far, however, the peoples of the Latin American states have felt so loyal to their separate countries that the dream of a central "United States of Latin America" is far from becoming a reality.

SUMMARY

The story of Latin America is another chapter, therefore, of the story of the spreading of Europeans over the earth. In this book we have read how the British established European colonies in North America, and how the British, French, Dutch, Belgians, and Germans built up European communities in Africa. We have learned that the Europeans also went to India, China, Japan, the Malay States, and set up their own ways of living throughout the Far East.

The present chapter has told us how other Europeans have spread European civilization in Central America and South America. This time it was the "Latins" — the Spanish and the Portuguese — who went out and discovered an unknown continent. At first their explorers were little more than daring adventurers who enslaved the Indian peoples, took their lands and property, and created great Spanish and Portuguese empires.

Gradually, however, other European peoples went out to the Latin American colonies to live. They built homes and cultivated farms. They developed villages, towns, and cities which resembled greatly the communities of their home countries in

Europe. Slowly the people began to think of themselves as "South Americans," "Mexicans," or "Brazilians," rather than as "Europeans," "Spaniards," or "Portuguese." Finally, as we have seen, these people revolted, and threw off the control of their royal European rulers. Today this territory includes twenty independent republics.

What kind of civilization has this new combination of peoples produced in South America? What kind of countries are Argentina, Brazil, and Chile? Are they great manufacturing countries like the United States and Great Britain, or are they rice and cotton growing countries like India or China? Are they changing as are most of the other civilizations of the world? These questions we shall seek to answer in the next two chapters.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*Bowman, Isaiah. South America. Rand McNally & Company, Chicago, 1915. A splendid reference. See Chapter VIII (The Inca Kings and People).

Lamprey, Louise. Days of the Discoverers, pp. 150–164. Frederick A. Stokes Company, New York, 1921. Cortes's adventures in Latin America.

Lang, Andrew. The Conquest of Montezuma's Empire. Longmans, Green & Co., New York, 1928. A well-written story of the ruin of an Indian civilization by Cortes.

Lanier, Henry Wysham. The Book of Bravery. Charles Scribner's Sons, New York, 1927. A good reference book. See Chapter XIII (The Man who conquered an Empire; Cortes in Mexico) and Chapter XIV (The Terribly Persistent Swineherd; Pizarro in Central America).

Lansing, Marion Florence. Great Moments in Exploration, pp. 105–122. Doubleday, Doran & Company, Inc., Garden City, New York, 1928. Tales of early adventurers in Latin America.

*Synge, M. B. A Book of Discovery. G. P. Putnam's Sons, New York, 1925. An excellent account of the exploits of European adventurers in Latin America. Refer to Chapter XXVIII (Cortes explores and conquers Mexico) and Chapter XXIX (Explorers in South America).

Magazine Articles

"Among the Zapotecs of Mexico," *National Geographic Magazine*, May, 1927, pp. 501–553.

"Chichen Itza, an Ancient American Mecca," *National Geographic Magazine*, January, 1925, pp. 63–95.

*"The Foremost Intellectual Achievement of Ancient America," *National Geographic Magazine*, February, 1922, pp. 109–130.

CHAPTER XXIII

SOUTH AMERICA: A CONTINENT OF CONTRASTS

A great continent, which has a fringe of trading and manufacturing cities and a vast primitive interior

From Venezuela to Tierra del Fuego the traveler in South America meets one contrast after another.

At the equator, high in the Andes Mountains, he shivers with the Indian shepherds. A few hours of travel bring him into tropical valleys, where he swelters in jungle heat. On railway tracks 15,000 feet above sea level he crosses high mountains into broad plains where immense herds of cattle graze and 10,000-acre estates ripple with wheat. He wanders over the plains for days, encountering only a few rude Indian villages.

At last he reaches the east coast and finds himself in a great, rich, modern city — Buenos Aires, the city of millionaires. A sail of a day and a half northward brings him to broad rivers navigable for thousands of miles. In the interior of the continent he finds a vast unpeopled and unexplored jungle.

South America is a continent of contrasts, a continent of countries in the making.

An interesting example: a thriving modern city and a tropical jungle in the same country

Let us look at the tropical city of Rio de Janeiro, a beautiful city of over 1,000,000 inhabitants. The first thing that the traveler sees as he enters the bay is Sugar Loaf Mountain standing like a tall sentinel at the southern entrance to the harbor. Behind Sugar Loaf other green mountains group themselves, looking as if they had been cut from cardboard by a fanciful scene-maker. It does not seem possible that mountains could have such jagged peaks, or that plants and trees could cling to such steep slopes.

As the ship enters the harbor the passage seems narrow indeed, for great granite rocks stand but a mile apart at the mouth. Once they are passed, however, the bay opens into a small inland sea 50 square miles in extent, dotted with many little islands. Rio de Janeiro has grown up at this excellent harbor.

It is a modern city with street cars, automobiles, clean, broad, paved streets, and good hotels. Handsome buildings of the business section line the wide boulevard called Avenida Central.

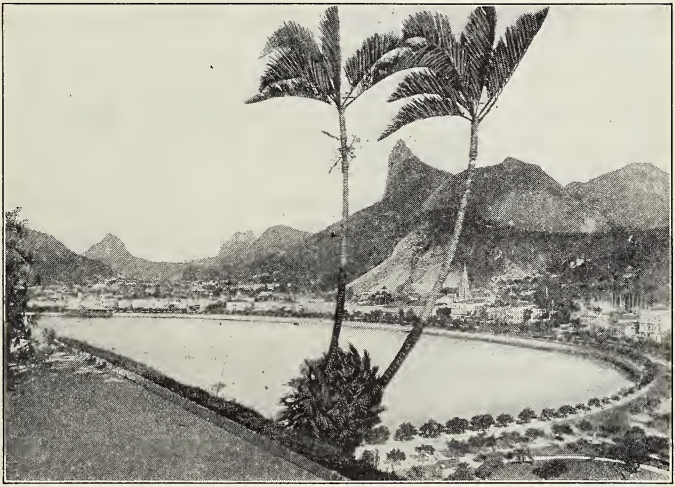

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FIG. 231. The beautiful modern city of Rio de Janeiro lies in a bay on the seacoast of Brazil. It is sheltered by tall mountains from hundreds of miles of jungle land in the interior

Fringing the city there are a number of small semicircular bays, where fine boulevards have been built along the shore. In the heat of the blinding daylight they are delightfully cool places to drive. There is a marvelous view over the inland sea to the mountains. The bay is still more beautiful by moonlight, and Rio de Janeiro at night is a city of rare beauty and romance — a cosmopolitan city, where travelers and traders from all parts of the earth mingle.

Far to the north and west of Rio de Janeiro, but still in Brazil, the traveler enters the mouth of a huge river to travel through savage regions thinly inhabited. There he reaches the heart of the great South American jungle, through which the broad Amazon River flows,—200,000 square miles of unbroken country peopled only by small numbers of almost unknown Indians.

From the summit of a low hill at night the traveler may gain some idea of the jungle. Behind him, before him, and to every side stretch the Amazon forests, seemingly endless in the blackness and quiet of night. The large golden moon sheds a warm light and seems to be hanging low above the earth. The river stands out clearly, a broad silver ribbon against the velvety blackness of forest. Occasional tall palms outline themselves against the deep-blue sky. The jungle casts a spell of quiet, peaceful enchantment.

The day comes over the jungle announced by a thin gleam of light tracing the tops of the black trees. The river turns pale yellow. A thick, malarial mist rises from the river. Then the air clears, and everything appears a vivid green. The river seems to flow more swiftly. As day advances everything becomes so hot that the water makes one think of a stream of hot metal. As the boat floats along one of the broad Amazon streams, thick swarms of insects surround the travelers. Woe unto the man who has not covered himself with copaiba oil, for he is sure to be bitten by some malarial insect.

A heavy silence hangs over the jungle at midday. The traveler has an unforgettable impression of weariness and languor. Occasionally heavy snakes coil about the limbs of trees near the shore.

At length the sun sets, and with its sinking the merry afternoon chatter of monkeys and of parrots and thousands of other birds dies away. The call of the jaguars is still. The heat decreases considerably to the great relief of man. A cool evening breeze rustles in the tropical foliage. Beautiful butterflies flit from bough to bough of the thickly intertwined trees and vines. The water mirrors the myriads of leaves, birds, flowers, and butterflies, and the jungle with its eternal green is wild and beautiful beyond words.

Someone has likened South America to the United States and then added, "But South America is more so!" That is because there seems to be almost every kind of climate, every kind of scenery, and every kind of contrast in South America.

THE RELATION OF SOUTH AMERICA TO THE REST OF THE WORLD

Before we study this strange continent, let us notice carefully how it is located (see figure 232).

From your study of the map, should you say that South America is located favorably for trade with the three centers of the world's densest population — the great masses of Asiatic peoples, the industrial countries of western Europe, and the United States?

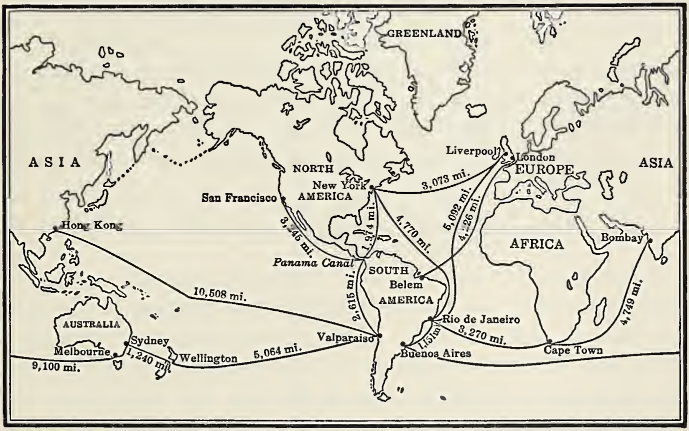
GREENLAND
ASIA
NORTH AMERICA
New York
San Francisco
Hong Kong
Liverpool
London
EUROPE
ASIA
AFRICA
Bombay
3,073 mi.
5,092 mi.
4,126 mi.
4,770 mi.
1,974 mi.
3,246 mi.
Panama Canal
SOUTH AMERICA
Belem
2,615 mi.
10,508 mi.
AUSTRALIA
Sydney
Melbourne
1,240 mi.
Wellington
5,064 mi.
9,100 mi.
Valparaiso
Rio de Janeiro
3,270 mi.
1,151 mi.
Buenos Aires
Cape Town
4,749 mi.

FIG. 232. The sailing distances between the principal ports of South America and some of the great world ports

Notice on the map one rather astonishing fact about South America. The eastern port cities, such as Rio de Janeiro and Buenos Aires, are nearer to Africa and Europe than they are to New York. From Rio de Janeiro to Spain is less than 3000 miles. From Rio de Janeiro to New York is 4770 miles.

This is easily explained if you notice the location of South America in relation to North America. South America lies decidedly to the *southeast* of North America. *The westernmost point of South America is almost exactly south of Florida.* From New York to Valparaiso in Chile, through the Panama Canal, is 4589 miles, 1332 miles less than the distance from New York to Buenos Aires.

Lay a scale on the map of the world and compare distances between Europe and North America, Europe and South America, and Africa and South America. Now you see why it is that European aviators succeeded in flying from Europe to the Canary Islands or to the coast of Africa and thence to South America. It is much easier and much shorter to go by that route than it is to fly from Europe to North America.

Notice also that most of South America is in almost the same latitude as the southern half of Africa, all Australia, and the Malay States. These are *the lands of south latitude.* Most of South America is below the equator. It extends from about 10° north latitude to about 55° south latitude. North America, northern Africa, Europe, and Asia are the lands of north latitude. You have studied much about lands of north latitude in this book, but very little about lands of south latitude. Keep in mind as we continue the story of South America that this continent is largely in south latitude.

The Continent itself: What Kind of Land is it?

If you turn to the Appendix, Table II, you will notice that South America is the fourth largest of the continents. It is less than half as large as Asia, slightly more than half as large as Africa, and about seven eighths as large as North America. However, it is nearly twice as large as Europe, and more than twice as large as Australia.

The highlands of South America

As you study the map following page 552, you will notice a long range of mountains running like a backbone from north to south through almost the entire continent. This is the Andes, one of the highest mountain ranges in the world. The Andes Mountains are thought to be a continuation of the Rocky Mountains.

The Andes Mountains are much higher than the Rockies — so much higher that some of the summits of the Rockies would seem little more than foothills by comparison. The Andes form such a lofty barrier to travel from east to west in South America that until recent years it has been extremely difficult to cross them. There is no pass in the Andes between northern Peru and central Chile which is less than 11,000 feet in height.

The railway mileage throughout South America is very small, owing partly to the tremendous difficulty of crossing the Andes and of connecting the east with the west. There is a long railway, built in the early 1900's, which winds along the heights of the Andes, from southern Peru to southern Chile. There is also an east-to-west line connecting Argentina with the coast of Chile. There are other short branch lines running from the coast into the mountains of Peru, Bolivia, Ecuador, and Colombia.

As one crosses from Argentina into Chile the train glides through many long tunnels which pierce the mountains as the railway winds upward. At Las Cuevas, the last stop in Argentina, the railway is 10,000 feet above sea level. Even at midday in the sunshine it is cold at such a height.

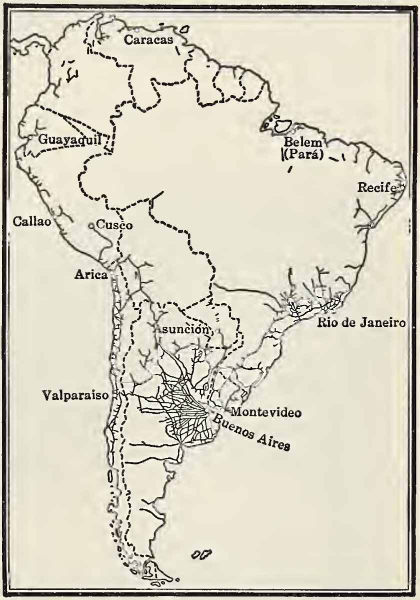

FIG. 233. The principal railways of South America. How do the railway lines of South America differ from those of the United States, Europe, and Asia?

Such are the Andes Mountains of South America. Are there other mountains besides the Andes? Where are they?

The lowlands of South America

The lowlands are the valleys of great rivers. On the map following page 552 look at the Orinoco, Amazon, and Paraná rivers, each with its great tributaries. Notice also the many smaller rivers.

The Orinoco may be navigated for 900 miles. The Amazon itself is navigable for 2300 miles and, with its tributaries, for

27,000 miles. The Paraná, with the Uruguay and the Paraguay rivers, forms a great and important river system called the Plata River. Notice that the sources of all the important rivers of the Plata lie very near to the Amazon system. How can you explain that fact from what you know of geography and "lay of the land"?

Jungles border the Amazon, the Orinoco, and the many tributary rivers which enter them. The dense, tropical vegetation forms a barrier to travel as difficult to overcome as the mountains in the west. On the colored map the elevation of the land of South America is shown. From it you can gain some idea of the problems which men have to solve in settling South America.

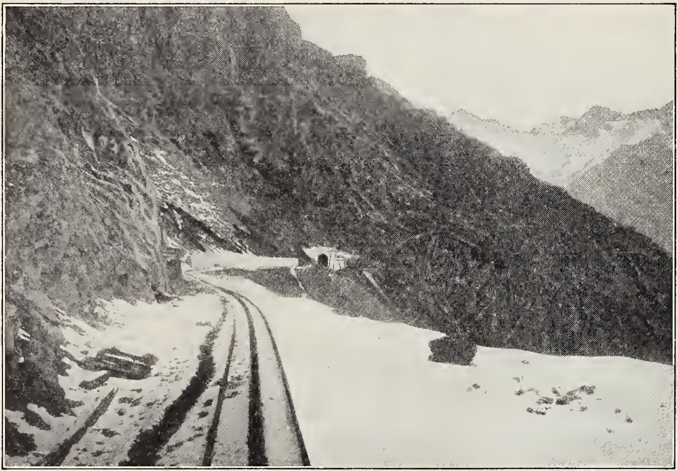

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FIG. 234. Railway-building is difficult in many parts of South America. Either steep mountain passes must be crossed or tunnels which pierce the mountain must be made

Some unexpected facts about heat and cold in South America

Marjorie was packing her trunk for a trip to South America. It was June.

"Marjorie!" I exclaimed. "A winter coat in June! You won't need a winter coat in June. What! A parasol and a bathing suit too! How on earth are you going to be able to wear winter clothing and summer clothing?"

"Don't be silly," said Marjorie; "you don't go only by seasons in South America. The weather goes by ups and downs. When you're up, it's winter. When you're down, it's summer."

"Up what?" I asked.

"Why, up the mountains. Didn't you know the second highest mountains in the world are in South America? They are so high that on the top of them it's always winter. When we go to Bogotá in Colombia, I'll carry my parasol in the morning and wear my toboggan cap in the afternoon."

"Yes," I said; "and pick flowers in the snowdrifts."

"Why, yes; won't it be fun? How did you guess?" she exclaimed.

At this point I gave up. South America must be a funny place!

Where are the hot regions of South America?

Do you know that the hottest regions of South America are near the equator in the *northern* part of the continent, that is, in the valley of the Amazon? *Colder* regions are found at the most *southern* point of South America, near the Strait of Magellan. *Thus in South America the hot regions lie to the north and the cool regions to the south.*

Is it ever cold at the equator?

But the really astonishing thing about South America is that distance up and down in the air makes more difference in the weather than distance north and south. There is much greater cold in the mountains near the equator than in the valley of the Paraná River. Even Uruguay, which is in the southern half of the continent, has a climate as warm and mild as that of Italy or California.

Bogotá, the capital of Colombia, is situated high up in the mountains. Notice on the map how near to the equator it is. There, except in the sunshine, the air is very cold even at noon, and the wind from the mountains cuts through warm garments as though they were thin silk. However, people never use artificial heat in their homes, and in the evening the cold is almost unbearable. At night the people of the city wear overcoats and furs the year round, so that this equatorial city has quite the appearance of an American city in early winter.

However, if one descends the mountains to sea level, he comes upon fields of sugar cane and hot jungle land.

In South America the seasons are reversed

Another surprising fact about South America is that the coolest months are June, July, and August, and the warmest are December, January, and February. In the southern regions of South America people begin to think about winter clothing in May; they dress most lightly in January. Buenos Aires, which is in the southern part of South America, has a very even temperature throughout the year, averaging 63°; hence there is no real winter there. The winter months from May to September are very mild. In the coldest days of July or August the temperature seldom falls below freezing, and snow is exceedingly rare.

Even farther south than Buenos Aires, in the plains of Patagonia, cattle and sheep can graze outdoors the year round, for the winters are short and mild.

Can you explain why the seasons are reversed in South America?

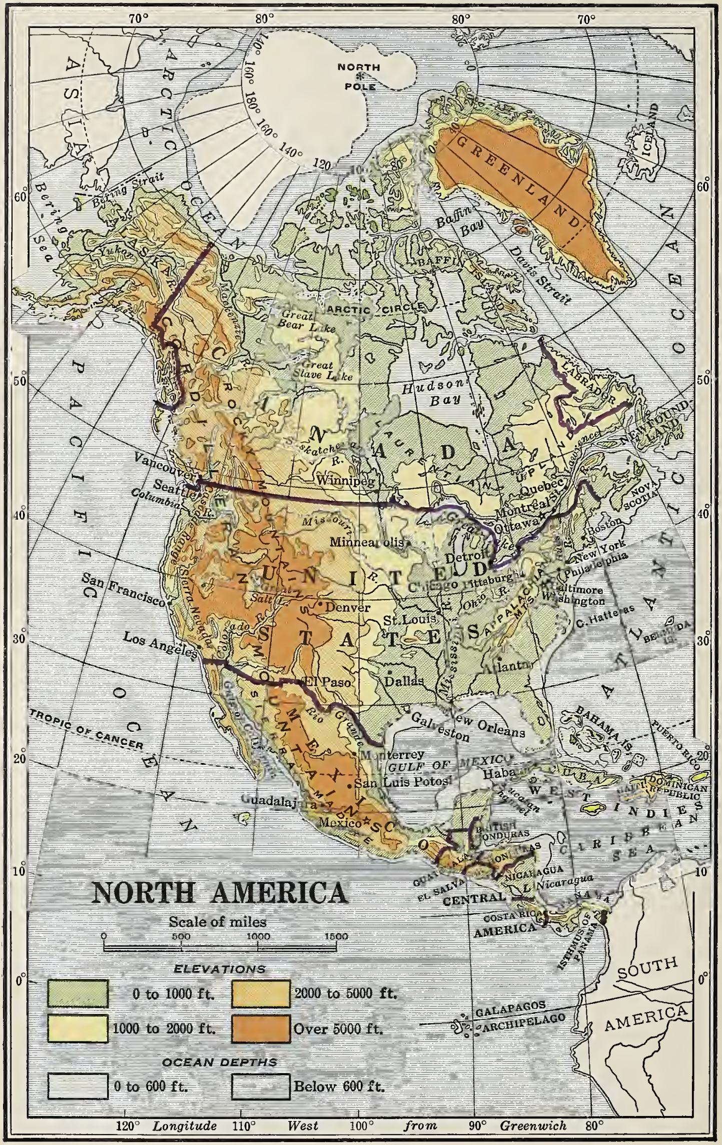
The People of South America

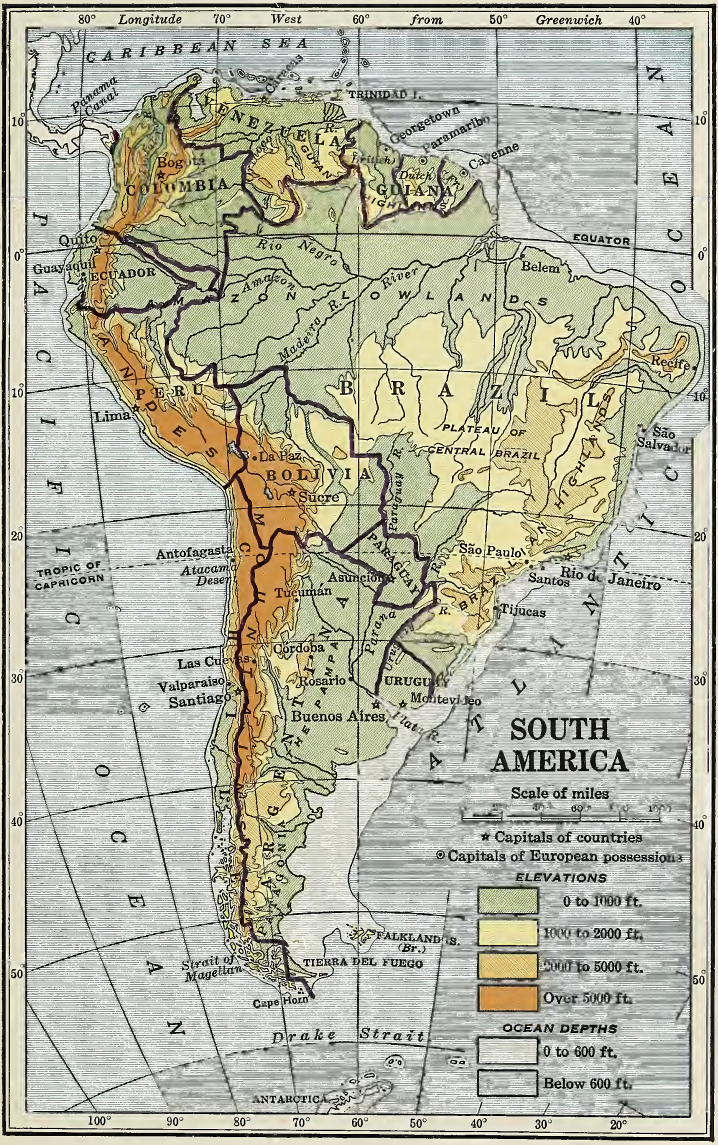
Where are the people living?

According to the most recent estimate there are only 80,861,000 people in all South America. This is a little more than half the people of the United States and but one sixth of the people of Europe.

On the population map of figure 235, you will notice that the people live chiefly in a few regions on or near the coast. In the southeastern part of the continent are 70 per cent of the population; 90 per cent of the people of European descent live in Brazil, Uruguay, and Argentina.

Brazil itself contains nearly half the people of the continent. But nearly the entire population of Brazil, about 37,000,000, live

NORTH AMERICA
Scale of miles
0 500 1000 1500
ELEVATIONS
0 to 1000 ft.
1000 to 2000 ft.
2000 to 5000 ft.
Over 5000 ft.
OCEAN DEPTHS
0 to 600 ft.
Below 600 ft.
120° Longitude 110° West 100° from 90° Greenwich 80°
NORTH POLE
ASIA
ARCTIC OCEAN
Bering Strait
Bering Sea
ALASKA
Yukon
GREENLAND
ICELAND
Baffin Bay
BAFFIN ISLAND
Davis Strait
ATLANTIC OCEAN
PACIFIC OCEAN
ARCTIC CIRCLE
Great Bear Lake
Great Slave Lake
Hudson Bay
LABRADOR
NEWFOUNDLAND
NOVA SCOTIA
CANADA
LAURENTIAN UPLAND
Saskatchewan R.
Winnipeg
Quebec
Montreal
Ottawa
CORDILLERA
ROCKY MOUNTAINS
Vancouver
Seattle
Columbia
Cascade Range
Sierra Nevada
San Francisco
Los Angeles
Great Salt L.
Colorado R.
Denver
Missouri R.
Minneapolis
Great Lakes
Detroit
Chicago
Pittsburgh
Boston
New York
Philadelphia
Baltimore
Washington
C. Hatteras
BERMUDA IS.
UNITED STATES
St. Louis
Ohio R.
Mississippi R.
APPALACHIAN MTS.
Atlanta
Dallas
El Paso
Rio Grande
Galveston
New Orleans
TROPIC OF CANCER
Gulf of California
SIERRA MADRE
MEXICO
Monterrey
San Luis Potosi
Guadalajara
Mexico
GULF OF MEXICO
Habana
Yucatan Channel
CUBA
BAHAMA IS.
PUERTO RICO
HAITI
DOMINICAN REPUBLIC
WEST INDIES
CARIBBEAN SEA
BRITISH HONDURAS
GUATEMALA
HONDURAS
EL SALVADOR
NICARAGUA
L. Nicaragua
COSTA RICA
PANAMA
ISTHMUS OF PANAMA
CENTRAL AMERICA
GALAPAGOS ARCHIPELAGO
SOUTH AMERICA



80° Longitude 70° West 60° from 50° Greenwich 40°
CARIBBEAN SEA
Panama Canal
Caracas
TRINIDAD I.
VENEZUELA
Orinoco R.
GUIANA
Georgetown
Paramaribo
Cayenne
British
Dutch
Fr.
GUIANA HIGHLANDS
Bogotá
COLOMBIA
Quito
Guayaquil
ECUADOR
EQUATOR
Rio Negro
Amazon
AMAZON R. LOWLANDS
Belem
Madeira R.
Recife
PERU
Lima
ANDES
BRAZIL
PLATEAU OF CENTRAL BRAZIL
HIGHLANDS
São Salvador
La Paz
BOLIVIA
Sucre
Paraguay R.
PARAGUAY
Asunción
Antofagasta
Atacama Desert
TROPIC OF CAPRICORN
São Paulo
Santos
Rio de Janeiro
BRAZILIAN HIGHLANDS
Tijucas
Tucumán
Paraná
Uruguay R.
Córdoba
Las Cuevas
Valparaiso
Santiago
CHILE
Rosario
ARGENTINA
PAMPA
URUGUAY
Montevideo
Buenos Aires
Plata R.
PATAGONIA
FALKLAND IS. (Br.)
Strait of Magellan
TIERRA DEL FUEGO
Cape Horn
Drake Strait
ANTARCTICA
PACIFIC OCEAN
ATLANTIC OCEAN
SOUTH AMERICA
Scale of miles
0 200 400 600 800 1000
★ Capitals of countries
⊙ Capitals of European possessions
ELEVATIONS
0 to 1000 ft.
1000 to 2000 ft.
2000 to 5000 ft.
Over 5000 ft.
OCEAN DEPTHS
0 to 600 ft.
Below 600 ft.
10° 0° 10° 20° 30° 40° 50°
100° 90° 80° 70° 60° 50° 40° 30° 20°

along the Atlantic coast, or in the rather thickly populated southeastern La Plata section. In the interior of the continent there is less than one person to the square mile. Why is this true? What other regions of the continent do not attract people? Why?

What races make up the South American people?

As you know, 400 years ago the Spaniards found the continent sparsely peopled with several million Indians. There were no Europeans, no Negroes, and no Asiatics, so far as we know. Although distinctly different tribes of Indians were settled in various regions, they were believed to belong to the same race.

Then in the early 1500's white men came and brought into the country large numbers of Negro slaves to do their work. Not many years had passed after the coming of the Spaniards before the character of the South American people began to change. The Europeans and Negroes had intermarried with the Indians, and several mixed groups of people appeared: the *mestizos*, who were a mixture of Indian and Spanish blood; the *sambos*, who were a mixture of Indian and Negro; and the *mulattoes*, who were a mixture of Negro and white. Of course the mestizos, the sambos, and the mulattoes intermarried too, so that today a large part of the population of South America is of the mixed blood of three races.

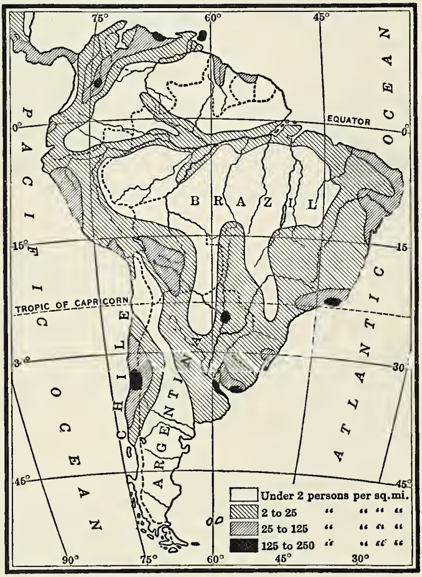

75°
60°
45°
0°
15°
30°
45°
90°
75°
60°
45°
30°
EQUATOR
TROPIC OF CAPRICORN
PACIFIC OCEAN
ATLANTIC OCEAN
BRAZIL
CHILE
ARGENTINA
Under 2 persons per sq.mi.
2 to 25 " " " "
25 to 125 " " " "
125 to 250 " " " "

FIG. 235. The density of population in South America. Compare this map with figure 184. What differences do you see?

The people of the different races are divided as follows:

1. About one fourth of the people are white (approximately 20,000,000).
2. About one fourth of the people are Indian or Negro (approximately 20,000,000).
3. About one half of the people are of mixed blood (approximately 40,000,000).

These figures are not exact, but it would be very difficult to find out accurately the race of every person. However, at least one half of the people of South America are of mixed blood.

Since the 1500's the Indians of South America have increased very slowly in numbers. In this respect the Indian population of South America resembles that of North America. The white people, the Negroes, and the people of mixed blood have increased more rapidly than the Indians. The entire population of the continent has increased several times, like that of Europe, Asia, Africa, and North America.

In the past 50 years people have emigrated to South America in large numbers

In *An Introduction to American Civilization* you read that millions of immigrants came to the United States during the 1800's. Year after year the number of immigrants grew. In South America the population is growing in the same way — by immigration.

The South American countries welcome immigrants eagerly. They urge settlers from the countries of the world to come and make their homes in South America and help to develop the continent. Immigrants are coming by the hundreds of thousands and from many different countries. Argentina alone has welcomed more than 4,500,000 people to her shores during the past 50 years.

The Spanish and Portuguese are no longer the most numerous settlers in South America. To be sure, they continue to enter in large numbers, year after year, but there is another Latin country which sends even more people. That is Italy. Today approximately one fourth of the people of Argentina are of Italian blood.

The Germans also are coming into the various South American countries in increasing numbers every year. They are building homes and becoming patriotic citizens.

Whereas many of the Italians and eastern Europeans have gone there as laborers or farmers, the British have gone to South America chiefly as traders and business men. They have invested money in banks, farms, railways, mines, ranches,— every kind of business,— and although they are not so numerous as immigrants from other countries, they influence the life and the trade of South America to a great extent. Before the World War British business men had invested $5,000,000,000 in South America. At the same time the German and the French business men each owned investments worth about $1,500,000,000.

The immigrants include people even from far-off Japan and Arabia. All along the west coast many Chinese and Japanese have come to live. British immigrants have settled in Chile, and the French settlers have gone chiefly to Argentina and the northern countries.

The United States and Canada have sent fewer immigrants to Argentina than have any of the countries of Europe — only 6000 during the past 50 years — in spite of the fact that South American countries have encouraged immigration from the north. Many countries have even offered special inducements; for example, Bolivia offered to Canadian and American families who might be interested in settling there 1000 farms consisting of 120 acres each. Each farm was to cost only $5.

THE RESOURCES OF SOUTH AMERICA HAVE BEEN BUT LITTLE DEVELOPED

South America, as we have seen, has some serious natural handicaps to overcome in the development of machine manufacturing. More than half the continent lies in the tropical zone, near the equator. There jungles and heat drive people away. The few Indians and Negroes who do live in the jungle regions of the interior do not care to work; nor is it necessary for them to exert themselves, for they can get what food, clothing, and shelter they need with little effort.

As you have learned, the Andes Mountains form a serious barrier to communication between the east and the west. Furthermore, the mountains are so high that they do not attract people, and there are many mountainous regions that are inhabited only by Indian shepherds.

South America is a young continent, and its natural resources have not yet been widely developed; hence most of the countries of South America lack capital to build railways, factories, and mines. Some of the capital now available has been supplied by European and American business men, but there is not yet enough to meet all the needs.

South America is also handicapped in manufacturing by lack of power. There is some coal in the land, but it is of poor quality — chiefly low-grade bituminous or lignite. Even this supply has not been developed, and South America imports more coal than any other commodity. The few factories of Argentina, Brazil, and Chile use most of this fuel.

Oil, the second most important fuel, has been discovered recently in Colombia, Venezuela, and Peru. No one knows yet just how much petroleum South America contains, but it is estimated that there are many important deposits lying beneath the earth.

Few hydroelectric power plants have been built, but the many mountain streams and rivers of the continent contain enormous possibilities for future development. It is estimated that South America has in its streams 12 per cent of the possible water power of the world.

The railways, waterways, and roadways of South America are still far behind those of Europe and North America. There are not nearly enough railways to furnish transportation and communication with seaports. Therefore today the possibilities for commerce by sea are much better than for trade by land among the countries of the continent.

The cities of South America are not manufacturing centers. The main ones are trading cities on or near the coast, from which the outside world receives great supplies of raw materials. To them the railways bring the chief products from the interior, which boats then carry to all parts of the earth. Manufactured products are brought from the outside world. Most of these goods are sold to the people of the cities, and the rest are carried back to the few people in the interior. The railways of the continent have been built chiefly to connect the great inland farms or mines with the ports.

Can South America become a Center of Modern Industry?

In spite of the fact that the countries of South America have been handicapped in their development and have not yet turned to manufacturing, they offer some important possibilities for it.

There are, for example, vast undeveloped areas where rich mineral deposits lie under the ground. It is said that in Brazil, north of Rio de Janeiro, are the largest deposits of high-grade iron ore in the world.

Furthermore, other minerals needed for steel-making are found more extensively in South America than anywhere else in the world. You remember that the United States, England, France, and Germany have had to import several minerals, among them tin and vanadium. These two important minerals are found in Bolivia and Peru. Bolivia supplies one fourth of the world's tin, and Peru, about three fourths of the world's vanadium.

There are also great deposits of copper, platinum, silver, and gold. These mineral deposits of the continent have not been used to any extent by the people of South American countries. They have been sold to Europeans and Americans in exchange for manufactured goods. They have furnished an important share of the raw materials needed in the industries of other countries, but they have not been used in manufacturing in South America. As South America develops, however, it will not be necessary for her countries to depend upon other parts of the world for some of the important raw materials.

The Industrial Revolution helped to make South America One of the Greatest Food-Exporting Regions

Of the world's supply of certain foods South America exports more than

85 per cent of the coffee
25 per cent of the wheat and wheat flour
66 per cent of the corn
55 per cent of the beef
25 per cent of the mutton

South America also supplies more than 30 per cent of the hides and skins and more than 25 per cent of the wool produced throughout the world.

How could the Industrial Revolution have brought about this result, you ask? There were several important reasons. First, it was owing to the knowledge of men of science. They learned how to preserve foods, such as meat and fruits, by refrigeration, so that large quantities can be shipped great distances without spoiling. As a result thousands of ships sail each year from the harbors of Argentina, Brazil, and Uruguay, laden with beef, mutton, fruit, etc. They go to England, the United States, Germany, and other industrial countries.

Second, the Industrial Revolution helped South America to become a great exporter of food products, because England, Germany, and other manufacturing countries came to depend on Argentina and other South American countries for food supplies. Turn back to the map of sea trade, figure 146. Note that one of the large bands of trade is that between the east coast of South America and western Europe. That heavy band tells the story of thousands of British ships coming into Buenos Aires and other South American ports laden with coal and going back to Great Britain laden with wheat, corn, beef, mutton, and many important raw materials. So you see again how the Industrial Revolution has made our earth over into a very small interdependent world. Because industrial regions depend on agricultural ones for food, South America has become one of the most important food-supplying regions for the industrial countries.

In the southern part of the continent there are vast stretches of fertile, level land in a warm, mild climate. These are being made to yield enormous crops. As immigration increases and more people are available to do the work, these areas may grow into important centers of population, agriculture, industry, and trade.

Already the agricultural areas of the continent are helping to feed the world. South America is still largely a continent of farms. The farms range in size from the little plots of ground worked by Indians with hand tools, to the great haciendas of Argentina. The little plots are not farmed scientifically, and they yield meager crops. The large estates, however, are being made to yield enormous amounts of grain and animal products. In Argentina much of the farming is done by modern machinery — tractors, drillers, reapers, and binders like those used on the farms of our Middle Western states.

Since the Industrial Revolution began the Europeans have changed every continent to which they have emigrated. South America is no exception. Many of the Europeans who have come to South America have helped to make that country a great food-exporting region through their knowledge and use of science.

Thus, although South America is handicapped by location in a warm climate, by barriers to transportation and communication, by lack of fuel, and by lack of people scientifically trained to develop her resources, yet she has undreamed-of possibilities in agriculture, in mineral supplies, and in undeveloped power.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*ALLEN, NELLIE B. South America. Ginn and Company, Boston, 1918. Very good reference. See Chapter VI (The Amazon Valley).

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*BOWMAN, ISAIAH. South America. Rand McNally & Company, Chicago, 1915. An unusually good study of ways of living in different parts of the continent. Refer to Chapter VII (Highland Dwellers of Bolivia and Peru), Chapter XIII (Amazonia: Land of Great Forests and Rivers), Chapter XIV (Ecuador: Land of Volcanoes), Chapter XV (Lowland and Highland Peoples of Colombia), and Chapter XVI (The Mountains and Llanos of Venezuela).

*BROWNE, EDITH A., FORREST, A. S., and CHRISTMAS, E. W. South America (Peeps at Many Lands Series). The Macmillan Company, New York, 1915. A most interesting book, depicting modes of travel, raising food, etc. in this continent.

*FRANCK, HARRY A. Vagabonding down the Andes. The Century Co., New York, 1917. An excellent travel book.

*FRANCK, HARRY A. Working North from Patagonia. The Century Co., New York, 1921. Another entertaining and informative travel story.

Magazine Articles

*"Buenos Aires to Washington by Horse," *National Geographic Magazine*, February, 1929, pp. 135–196.

"Exploring the Valley of the Amazon in a Hydroplane," *National Geographic Magazine*, April, 1926, pp. 353–420.

*"Flying 12,000 Miles over Brazil's Great Jungle," *Literary Digest*, February 20, 1926, pp. 60–72.

*"How Latin America looks from the Air," *National Geographic Magazine*, October, 1927, pp. 451–502.

"Over the Andes to Bogota," *National Geographic Magazine*, October, 1921, pp. 353–373.

*"Round about Bogota," *National Geographic Magazine*, February, 1926, pp. 127–160.

*"The Amazon, Father of Waters," *National Geographic Magazine*, April, 1926, pp. 444–463.

"The Heart of Aymara Land," *National Geographic Magazine*, February, 1927, pp. 213–256.

*"The Latin America Hoover is Seeing," *Literary Digest*, December 22, 1928, pp. 30–39.

"The Volcanoes of Ecuador, Guideposts in Crossing South America," *National Geographic Magazine*, January, 1929, pp. 48–93.

CHAPTER XXIV

THE A B C COUNTRIES OF SOUTH AMERICA

There is not enough space in this book to tell about each of the ten countries of South America. We can consider only the three largest and most thickly populated. These three — Argentina, Brazil, and Chile — are known as the A B C countries.

I. Argentina: A Country of Great Ranches

How large and how thickly populated is Argentina?

The map of figure 236 gives you some idea of the size of Argentina. The area is about 1,150,000 square miles, or about two fifths that of the United States, and slightly less than two fifths that of Brazil.

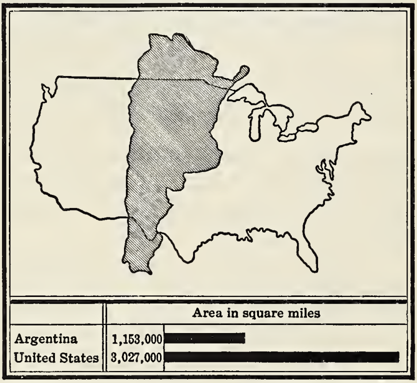

Fig. 236. How much larger is the United States than Argentina?

Official estimates give the population of Argentina as about 10,000,000 people — less than the state of New York. Most of these people are grouped near Buenos Aires, the capital; 2,000,000 are in the city itself. Turn back to the population map of figure 235. Notice that the valley of the Paraná River is fairly heavily populated. The greatest massing of people is near the mouth of the Plata. In the vicinity of the cities and towns of this river valley the population is about 125 to 250 persons per square mile. In density of population this region reminds one a little of our northern industrial section.

By far the greater part of Argentina, however, is a great farming country, and people are few and far between. Even in the northern part of the valley of the Paraná the population becomes very thin, — less than one person to a square mile, — because in this northern section there are heavily wooded regions bordering on the jungle. There in the lumbering section very few people have made their homes.

A little town in Argentina illustrates why the population of many parts of this country is so small. Wild land surrounding the town to the amount of 7,000,000 acres, extending even to the Bolivian border, is owned by one Argentinian family. The town itself consists of a sawmill, an extract plant, and the houses of the employees. A very narrow little railway track is built out into the jungle. Logging trains carry hard wood over this track from the jungle to the sawmill. One particular kind of wood, called *quebracho*, is cut more than any other; for tannin, which is necessary for tanning leather, can be extracted from its bark.

Argentina is one of the world's greatest producers of wheat

The greater part of Argentina, however, is used either for farming or for ranching. Huge 1000-acre wheat farms cover the great plains. The average estate farm of Argentina is estimated to be 3480 acres. Most of these farms lie east of the Andes in the great fertile plain which extends for miles eastward and southward to southernmost Chile.

On these huge farms are raised great crops of wheat, corn, oats, flax, sugar, cotton, tobacco, and grapes. In the valley of the Paraná River are vast wheat fields of rich green. Here one may see two men on the seat of a motor-driven plow assuring each other in voluble Spanish that the lands of this region are worth ten times those of the interior. One cannot doubt them after seeing the rich, black earth turned behind the plow. It is said that this land will produce two crops of potatoes a year.

Toward the mountains one can travel westward for days. The eyes become tired by the sight of endless fields of wheat, oats, and corn. The country is nearly as monotonous as the great plains of North Dakota. There are many ranches and villages on the plain.

Fat cattle and sturdy sheep graze in the fields. The round golden ears of corn, ready for husking, would make a Kansas farmer envious.

Most of the European immigrants into Argentina go into this farming country. They usually cannot afford to buy the land, but they can rent it from the owners of the huge estates. The newcomers set up housekeeping in floorless, one-room, adobe huts roofed with sheet iron. From the landlord they get seed and the use of implements and animals for planting and harvesting. In return they pay half their crop to the landlord as rent.

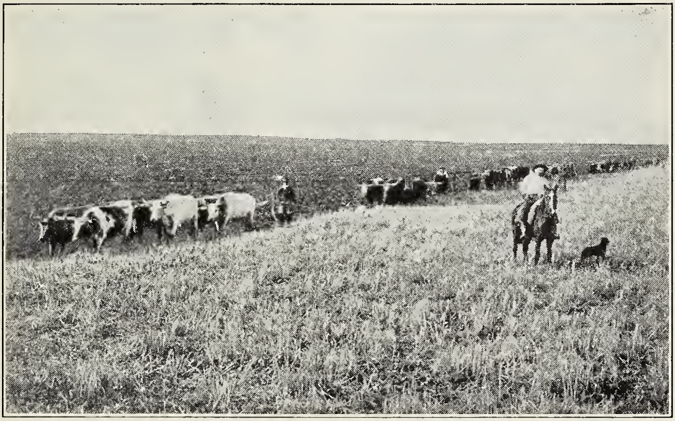

Fig. 237. While much of the plowing on these large grain-producing farms of Argentina is being done by motor-driven machines, yet one may often see oxen pulling the plow while a farmer trudges in back of it

Export of Wheat	
1898 . . .	25,000,000 bushels
1929 . . .	243,000,000 bushels
Export of Corn	
1900 . . .	28,000,000 bushels
1929 . . .	198,000,000 bushels

The work of the immigrants is hard, and the huts in which they live are lonely and cheerless; but in spite of these conditions many come, hoping to get a better living. In a recent year 250,000 European immigrants came to lead this kind of life. By means of thrift and hard work many of them manage to get ahead.

During recent years wheat and corn exports have increased in importance, as you can see from the above table.

South of the wheat region lies the great Pampa of Argentina, where cattle, horses, and sheep are raised

The Pampa is a great grazing plain, a land of broad horizons. The area of the Pampa is so great that there is a decided difference of climate from north to south. In the northern Pampa the climate is very warm. In the southern regions the ground may be covered with snow during the cold months.

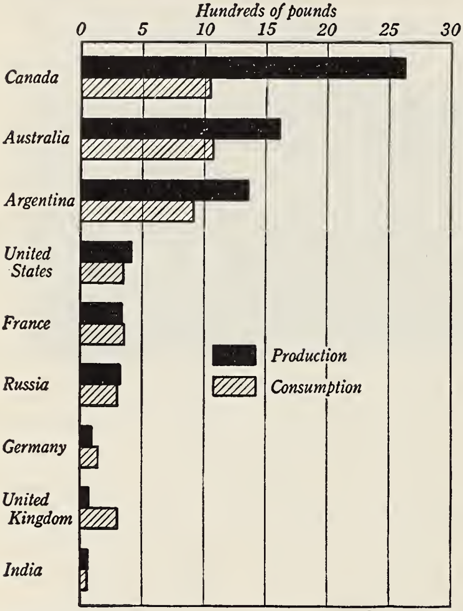

Fig. 238. Production and consumption of wheat per person in one year in the most important wheat-growing countries of the world[1].

Across the ocean-like surface of the Pampa can be seen only trails of dust from the wheels of wagons or the hoofs of great herds of animals. They appear like the smoke of small steamers on the immensity of the sea.

Bare as these lands seem at first glance, they contain a chief source of wealth to this wealthiest country of South America, namely, the immense herds of cattle, sheep, and horses grazing upon them. Their meat, their wool, and their hides help to supply the world market. It was estimated in a recent year that there were 30,000,000 cattle in Argentina, and 10,000,000 horses, and 50,000,000 sheep. The boundaries of this store of wealth cannot be spanned in one day or in twenty days.

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[1] For each one of her people Argentina produces more than 1300 pounds of wheat, of which more than 900 pounds are consumed. This is much more than is produced or consumed per person in any of the industrial countries.

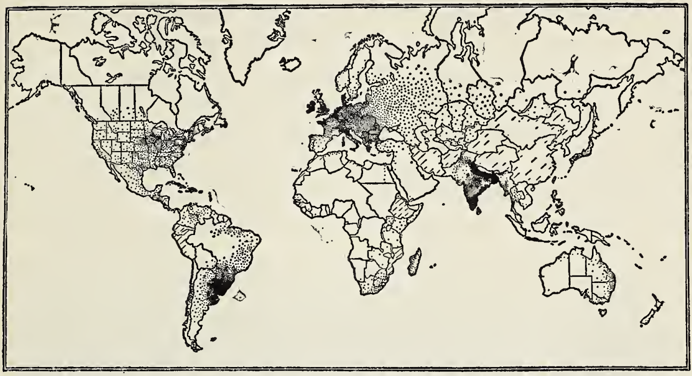

Fig. 239. The dotted regions of the map show where the cattle of the world are raised. The great number of dots covering Argentina shows the important part this country plays in the world's meat supply

The animals outnumber men by millions. Very few people, indeed, live there, for a huge herd needs only a few cowboys. This region is like the old plains country of the Far West in the days of cowboys and ranches. Every head of "beef" needs from four to seven acres of wild grazing land.

A round-up on the Pampa

Once a year *rodeos*, or round-ups, are held on the Pampa. Then the great herds of cattle are brought together at certain spots on the ranches, usually near water.

The cowboys of Argentina are called *gauchos*. They are picturesque fellows, usually mestizos who are born to the wild, free life of the Pampa. They are superb horsemen, more at home in the saddle than on foot. The gaucho usually wears a colorful costume of wide, flowing trousers, riding boots, and a loose, light shirt. He has also a striped blanket, which he may carry on his saddle or wear as a poncho in cool weather.

During the rodeo the gauchos come together with their great herds. As the main herd gathers, several gauchos ride at the rear, whooping and yelling to urge the herd forward onto the rodeo grounds. By the time the entire herd is gathered, there may be as many as 10,000 cattle.

Then the gauchos rope the young calves that are to be branded. These gauchos are superbly skilled with their lassos. They excel the old-time American cowboys, for they use much longer ropes, and their ponies are only partly tamed and trained to approach the herd. It seems miraculous to see a gaucho noose a running calf through a narrow opening in the constantly shifting mass of cattle.

Unfortunately, some of the picturesqueness of the gauchos and the Pampa is disappearing. More people are coming into Argentina, and wheat-raising and corn-raising are replacing cattle-raising. The open range land is being fenced, and fewer cattle are being grazed.

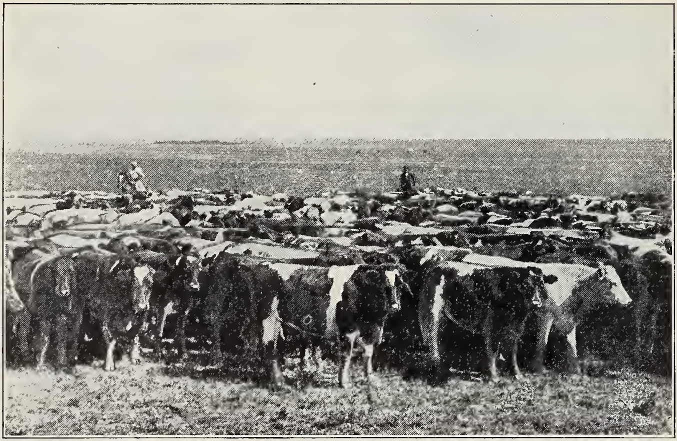

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Fig. 240. Gauchos rounding up cattle on the Pampa of Argentina, which is the great live-stock-producing region of South America

Buenos Aires: a city of millionaires

In order to appreciate the number of fortunes made on the ranches of Argentina, one has only to visit Buenos Aires, the capital. More than 2,000,000 people — about one fifth of the entire population of the country — live there.

Buenos Aires is the largest city south of the equator. It is located on a flat plain at the edge of the Plata River, where the river empties its muddy waters into the Atlantic. Thousands of millionaires live there, men who have made their money out of the rise in the value of their ranch lands as well as from the sale of grain or meat. The fathers or grandfathers of many of these wealthy people bought the huge estates for almost nothing. Since that time the land has become very much more valuable, and great fortunes have been made by the owners.

Fifty years ago Buenos Aires was like a Spanish city of the Middle Ages, with unlighted and unpaved streets and no sewage system. The houses were built chiefly of adobe, or sun-dried brick. The people of Buenos Aires then had very little contact with the outside world. Since that time, however, railways have been built to connect the capital with many other cities of the continent.

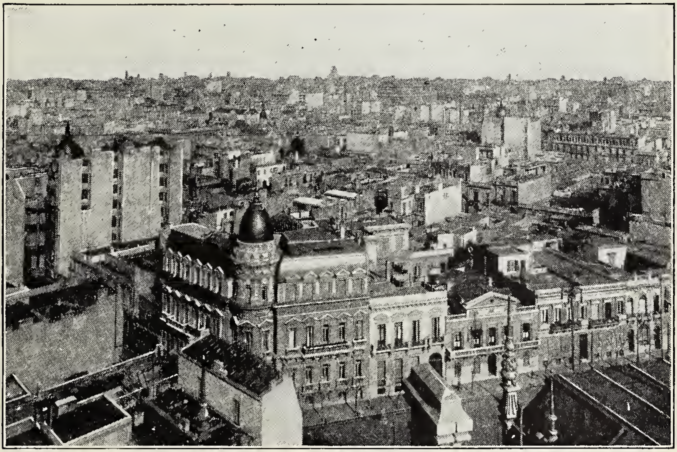

FIG. 241. Does Buenos Aires look to you like a great, clean, prosperous city? Does it look like other cities in thriving industrial countries?

Today Buenos Aires is a very beautiful city with miles of boulevard bordered by expensive mansions built in the French, Spanish, or Italian style. There are many lovely parks which are kept like gardens. The clubs of the city, particularly the Jockey Club, are among the best in the world.

Because it is a rich man's city, Buenos Aires has little of the ugliness of the large industrial city. There are almost no slums, comparatively few factories, and little smoke or soot.

It is a very important center of business. As many as 30,000 ships a year carry out meat and animal products and bring in coal, manufactured goods, and luxuries.

There has been a most astonishing development in Argentine trade since 1875. At that time exports amounted to $100,000,000. In 1925 (50 years later) they amounted to $800,000,000. Almost all this export trade was food, and much of this remarkable growth of trade was due to the invention of methods of refrigeration.

Argentina has several other centers of population besides Buenos Aires, but they are not nearly so large. Córdoba, the home of a university over 300 years old, Rosario, in the heart of the timber trade, Tucumán, the center of the sugar industry, all are important cities.

II. Brazil: A Huge Country Rich in Tropical Products

How large and how thickly populated is Brazil?

"Nine days we were sailing along the Brazilian coast line!" exclaimed Secretary Colby of the Department of State in 1921, telling of his trip to South America. "Think of what that means!"[1]

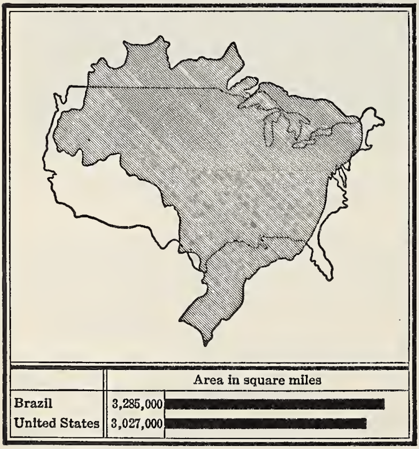

Fig. 242. How much larger is Brazil than the United States? How does the area of Brazil compare with that of Argentina?

On his trip Secretary Colby had the opportunity to learn much about the size of this largest of the South American countries, for Brazil is 258,000 square miles larger than the United States and nearly as large as Europe. If Brazil were as densely populated as France, it would have 622,000,000 people, instead of its 39,000,000 inhabitants.

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[1] Jacob Warshaw, *The New Latin America*, p. 5. Thomas Y. Crowell Company, New York, 1922.

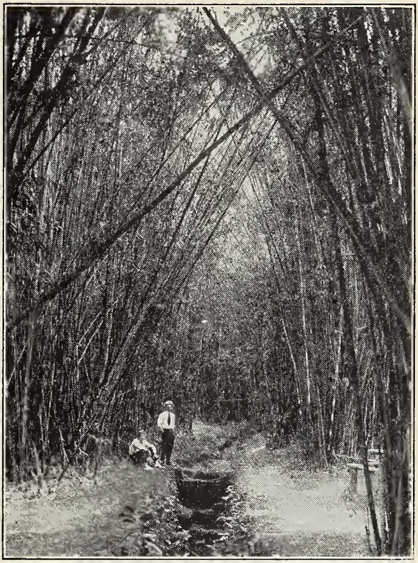

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FIG. 243. A giant bamboo jungle of Brazil

The population of Brazil, which is more than half that of the entire continent of South America, is not evenly scattered over the country. Inland Brazil is an almost unpeopled jungle. A large part of this territory is yet unexplored. East and southeast of the Amazon River valley are the Brazilian Highlands. They are rich agricultural and grazing lands where cattle, corn, wheat, potatoes, and beans are raised.

Brazil's people, therefore, are grouped either along the coast in the various port cities or on the southeastern highland plain. People have settled in those regions because it is easier for them to get a living there than in the jungle land of the interior.

The raw materials of Brazil are of great value

Brazil has vast but undeveloped iron deposits, as we have seen in Chapter XXIII. Gold, diamonds, petroleum, and some coal are also found in the earth of this rich country.

Diamonds were discovered by adventurers from São Paulo who were looking for gold. Gold was found in considerable quantities near a certain muddy stream. A town was founded there called Tijucas. Gold dust and nuggets were so plentiful in that region that they were used as money. The story is told that when electric-light poles were put up, children carried off the earth which had been dug up. They washed it to free the gold that was in it. Even today when there is a rainstorm in that town, tiny particles of gold can be picked up from the gutter or along the edges of the stream. This is a place where gold is actually picked up in the streets, yet the people are poorer and more ragged than those who live by farming.

While they were searching for gold, the miners of Tijucas found some bright half-transparent pebbles. These pebbles were of no use to them; so they gave the largest of them to the children. Some of the pebbles the villagers used as counters in their card games. In this way about a bushel of the pebbles were collected in the village and in the neighborhood. One day a man arrived from Portugal. He played cards, and, noticing the odd counters which the villagers used, remarked that he liked the pebbles and wished to have some for keepsakes. He managed to gather about half a bushel of the bright pebbles and then suddenly disappeared. The pebbles were diamonds!

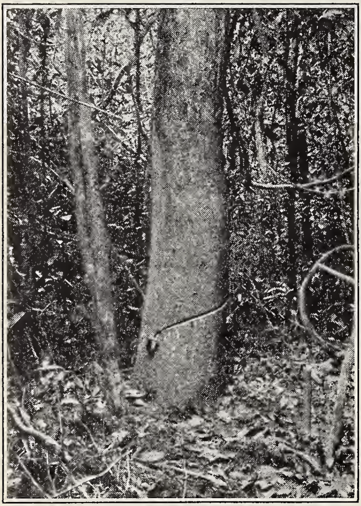

Fig. 244. Rubber trees are found growing wild in Brazil. The scar near the base of this tree shows where it was tapped for the sap from which rubber products are made. (Courtesy of the Bureau of Foreign and Domestic Commerce)

Word soon reached the ruler of Portugal that a new form of riches had been found in his colony. He learned later that the range of hills to the south of Tijucas was rich in diamonds. Then diamond-digging became an important industry of Brazil.[1]

Somewhat later another important industry developed, this time in the jungle region — rubber.

About 100 years ago people learned that rubber could be obtained from the wild rubber trees of Brazil. That fact had no importance to most people, however, for they had not learned to make use of rubber. In the middle of the nineteenth century, however, American and European inventors learned to treat raw rubber so that it could be used for clothing, bicycle tires, buggy tires, and many other things. After 1895 came the invention of the automobile and with it a great increase in the demand for rubber for tires. Brazilians began to develop their rubber trade. In 1870 as much as 10,000,000 pounds of Brazilian rubber had been exported, but so great was the demand for rubber after 1900 that in 1912 Brazil exported 93,000,000 pounds. Many men became millionaires in the rubber trade.

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[1] This episode is written from facts contained in an account by Harry A. Franck, in his *Working North from Patagonia*, pp. 328–329. The Century Co., New York, 1921.

The Brazilians soon lost much of their trade, for in the early 1900's British business men began to cultivate large plantations of rubber in the Malay States of the Far East. By 1910 they began to ship their rubber to England and other manufacturing countries. From that time on, Brazilian exports of wild rubber decreased, until at the present time only about 50,000,000 pounds a year are exported. Before 1900 Brazil supplied almost all the world's raw rubber. Today it supplies about 4 per cent. American capital, however, has recently been invested in great rubber plantations, and Brazil may hope to regain some of her lost trade.

Of all Brazil's agricultural products the one best known the world over is coffee

When one thinks of Brazil today he usually thinks of coffee. Cartoonists picture Brazil as a dark-skinned man in a big hat with a bag of coffee slung from his shoulder.

Coffee is grown on large plantations in the southeastern part of the highlands of Brazil. The center of the coffee-growing is near São Paulo, whence much of it is sent to the port city of Santos to be shipped to other parts of the world. A trip through the coffee district there is delightful. You might drive for a short distance through green hilly country, cross a few brilliant streams of water, and draw up at the country home of the owner of the coffee plantation.

In the afternoon you will take a ride around the plantation. Hundreds of men, women, and children are busy with cloths, sieves, and baskets, collecting berries. The *fazenda*, or coffee plantation, is run a little like a medieval manor. The people who

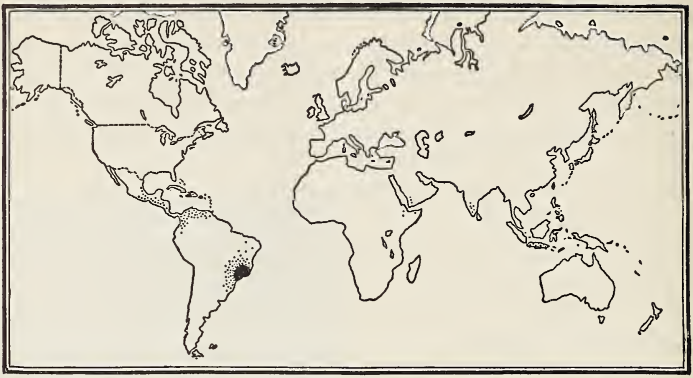

FIG. 245. The dots show where the world's coffee is grown. The map shows clearly that Brazil is the most important coffee-growing region in the world

work on it are given their little plots of land which they are to keep free of weeds, and on which they must also tend the trees and the vines which shelter the delicate coffee berries. The laborers have a right to plant either vegetables or grains between the trees.

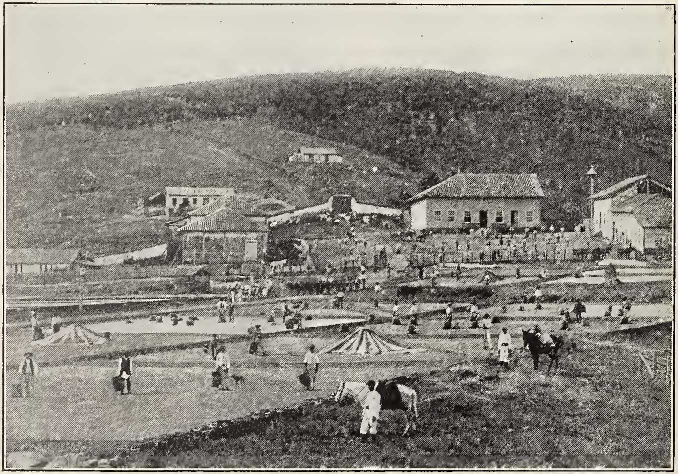

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FIG. 246. After the green coffee berries are picked, they are spread out in the sun to dry. This picture shows the drying-fields on a Brazilian coffee plantation

Most of the workers are negroes or immigrants from southeastern Europe or Japan. While they work they have a basket suspended from their shoulders, into which the berries are thrown. Cloths spread at the foot of the trees catch berries which have fallen. When the basket is full the berries are shaken through a sieve to free them of twigs and leaves. Each picker's collection is then measured, and the berries are taken to the terraces to be washed and spread in the sun to dry.

When the berries are dry they are passed through husking machines, which free the beans from the husks. The beans are then picked over by hand, packed, and sent to merchants to be sold.

The history of Brazil's development has been the story of the rise and fall of one important product after another. First, sugar was the fortune-making crop of Brazil. Then gold was discovered, followed by diamonds. Towns sprang up like mushrooms in the wilderness. Rubber came next. Today coffee is the chief export product of Brazil. All the other products are still raised or mined and exported, but in smaller quantities than formerly.

Scientists have made it possible to live in tropical Brazil, and trading cities are growing

The great Amazon River basin has always presented grave difficulties for settlers to overcome. It has been the home of malaria and many other tropical diseases. Men have dreamed of making it a productive, healthful home for white people, but the task of carrying out the dream is a tremendous one.

The beautiful city of Rio de Janeiro illustrates how they have succeeded in a measure farther south. In 1890 sailors dreaded to call at this port because of the danger of fever. Today it is one of the finest port cities in the world. Tropical fevers have been stamped out to a very great extent by modern sanitation. Rio de Janeiro is now a meeting place of people from all over the world.

Other cities besides Rio de Janeiro have been made livable in the tropics. Santos is one, although Santos is not a beautiful metropolis. Santos is the greatest coffee port in the world. It is a day's sail north of Rio de Janeiro, separated from the ocean by deep, wide bay. The city itself is poorly paved, and the streets are often muddy. Clattering mule teams carry coffee from the great warehouses to the docks. Street cars and trains run alternately on the same ramshackle track. Prices in the shops are very high. A long line of steamers lies always at the docks waiting to be loaded with coffee, for Santos is almost entirely a trading city.

Is Brazil well supplied with railways?

Look at the railroad map of South America, figure 233. Does Brazil have many railways? Where are they? Where do they center?

In most of Brazil there are few railways. Travelers must go on horseback, on foot, or by boat. The wealthier people may travel in their automobiles, but there are few good roads. Means of travel are very slow. Someone has said that it is easier for a merchant in Chicago to keep in touch with Australia than it is for a merchant of one of the coast cities of Brazil to keep in touch with the Amazon region.

Industries in Brazil

The many young and growing industries in Brazil cause that country to rank first industrially among the South American countries. However, Brazil lacks fuel for manufacturing and is obliged to import coal. In spite of this handicap the factories of the country supply 90 per cent of the cotton goods used there, much of the woolen goods, and nearly all the boots and shoes, hats, tobacco, and furniture. Can you see why these particular products should be manufactured more than others?

The export trade of Brazil is almost entirely of raw materials and food products. The principal exports are

Coffee
Yerba maté (tea)
Cacao
Hides
Frozen and chilled meats
Sugar
Tobacco
Rubber
Cotton
Leather

III. CHILE: A FARMING AND MINING COUNTRY

The queer, long land of Chile: its size and population

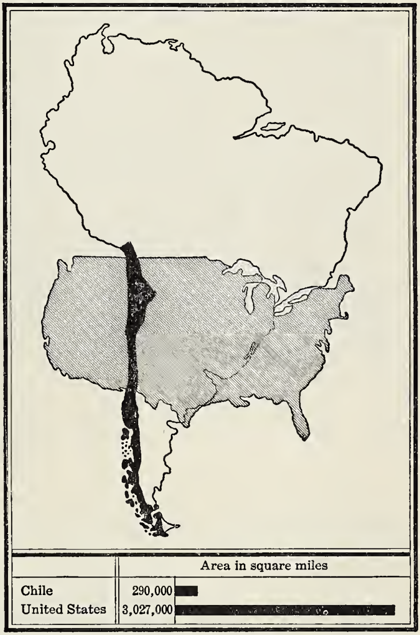

FIG. 247. How much larger is the United States than Chile? How does Chile compare in size with Argentina and Brazil?

Along the west coast of South America stretches the sword-like country of Chile. It is 2600 miles long, with the Andes Mountains running like a backbone between the eastern boundary and the sea to the west. It is nearly as long as the United States is wide, but its width is less than 200 miles.

Chile is the smallest of the A B C countries. Its land area is less than one tenth that of the United States. There are about 4,000,000 Indians, Spaniards, European immigrants, negroes, and mestizos in the country. Three fourths of the people are mestizos.

As you look at Chile on the map following page 552 and notice the mountains, the desert, and the sea, you may wonder how people of that long, narrow land manage to make a living at all. Nevertheless, every region of the country yields valuable products. From the mines of the mountains come copper, iron, coal, and other minerals. In the desert are great deposits of nitrate. From the coast lands come fruits and cereals. Along the coast there is fine fishing, and the harbors are active centers of trade.

THE THREE REGIONS OF CHILE

1. The rich desert of the north

The northern part of Chile is a desolate, dreary region. No one would ever dream that it holds great riches. Yet from this region comes the nitrate which before the World War supplied the world with fertilizer.

The great Atacama Desert, where the nitrate is found, is depressing in its desolate monotony. This desert extends for several hundred miles, and its beds of nitrate provide a considerable part of the revenue of Chile.

There is the same reflected light in the Atacama Desert as in the Sahara or Arabian Desert, the same scorching wind during the day, and the same bitter cold at sunset. Years may pass without a single drop of rain. The men who work in the desert, digging the nitrate, are constantly tortured with thirst.

There are no rivers through this region. The waters which flow from the Andes evaporate in the great heat or sink into the sand to reappear as salt pools in the desert. In the nitrate fields gangs of thin, bronzed men shovel the dust into iron railway trucks, which radiate heat. The desert shimmers in the sun, and far away the mountains stand out gaunt and bare.

The refineries look like great bare cement works. The houses of the workers look as if they had been dropped onto the desert. They are without flowers, shrubs, trees, or grass.

After the nitrate is dug, it is sent to the coast city of Antofagasta. Antofagasta is one of the chief ports of Chile and is about 100 miles west of the desert.

The nitrate industry was formerly the chief industry of Chile; but since Germany has begun to manufacture and to export large quantities of artificial nitrate, the Chilean trade has fallen off. Chilean nitrate is very expensive to mine, for every tool and every bit of food for the laborers has to be shipped at great cost over the desert.

The mines of northern Chile produce such great amounts of copper that Chile ranks second among the copper-producing countries of the world. The northern desert region is the richest section in Chile.

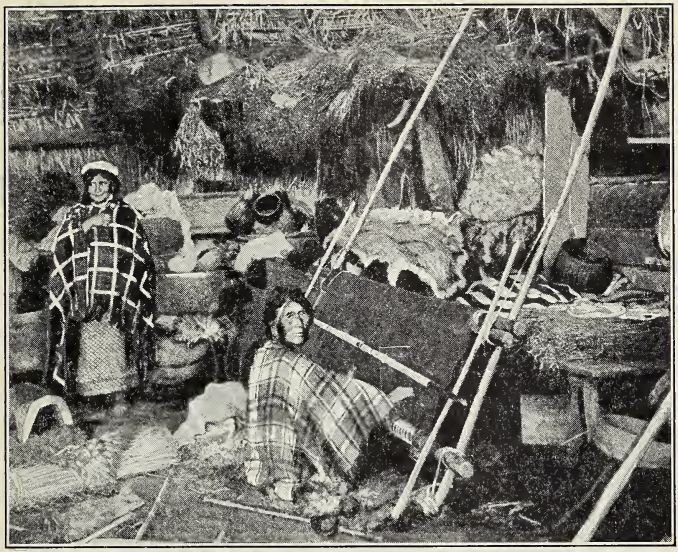

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FIG. 248. Most of the people of Chile are mestizos, a mixture of Indian and Spanish blood. Notice their primitive way of living, as shown in the picture, and the hand looms on which they make their shawls

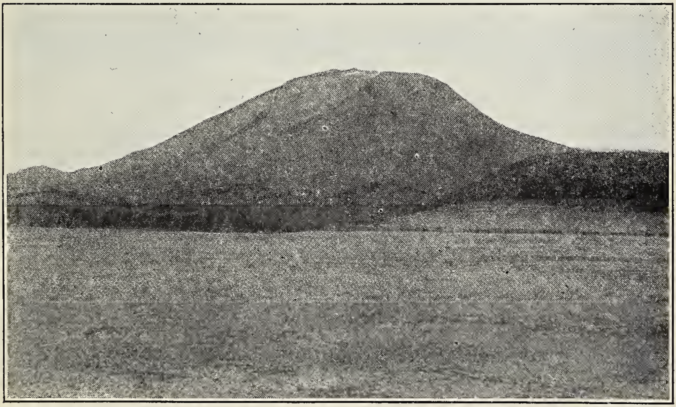

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FIG. 249. A nitrate field in Chile. From such desolate regions as this comes fertilizer, which helps agricultural products in other places to grow

2. The agricultural regions of central Chile

Traveling south from the desert land, one begins to notice tufts of grass, stunted bushes, and tall, red-blossomed cactuses. Then one enters a wide, irrigated valley, with great fields of green alfalfa and vines heavy with white grapes. These grapes, though growing under irrigation, are among the finest in the world.

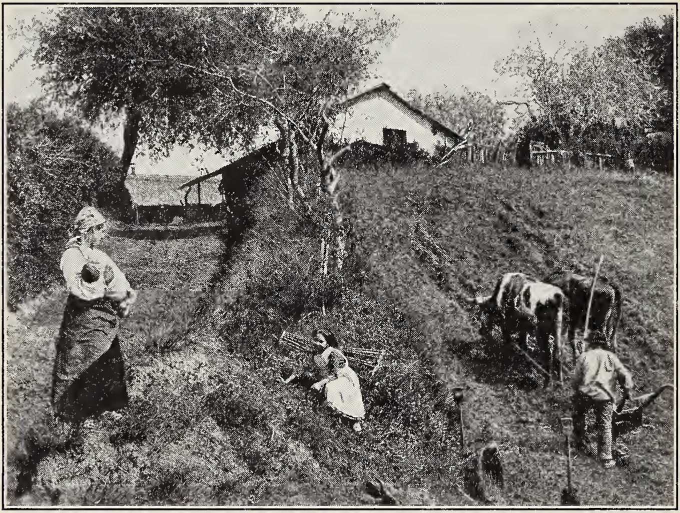

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Fig. 250. A homestead in the agricultural region of Chile

Wheat, corn, vegetables, and fruit grow abundantly in this valley. Here Chile raises almost all her food products. Sheep are also grazed in the central part, and from this region 25,000 tons of mutton are sent to England every year.

3. The southern section of Chile

Southern Chile is a wild, cool country with almost untouched forests of timber. These are beginning to supply lumber to world markets. Only a small part of this section is cultivated.

The chief product of southern Chile, however, is coal. This is the chief coal-producing country of South America. Government experts have estimated that there are 2,000,000,000 tons in this southern region where some of the deposits extend under the sea as far as 30 miles. While the greater coal-producing countries were actively engaged in the World War, Chile helped to supply the countries of Europe with fuel.

After the war this trade decreased sharply, but the government of Chile is now encouraging coal-mining by introducing modern systems of mining. Progress in the development of the mines has been slow until now, however, for Chile is handicapped by lack of capital. The government is also trying to help trade by improving the ports of southern Chile — constructing docks, and erecting great cranes which will help in the loading and the unloading of coal steamers.

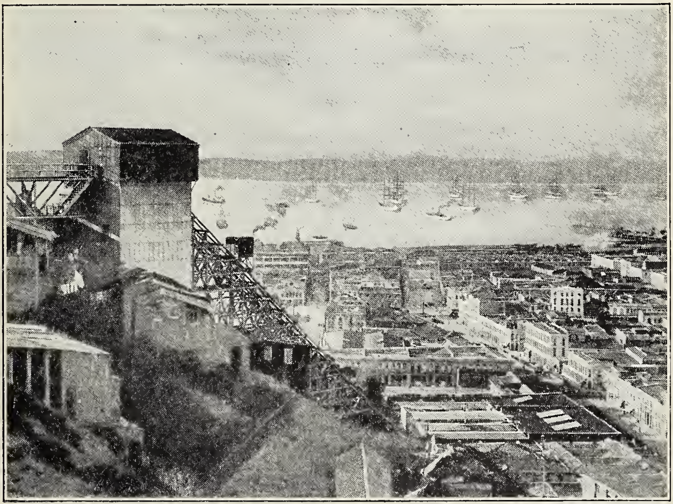

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FIG. 251. Valparaiso, the chief seaport of Chile

Has Chile factories and cities?

Chile has fewer factories than Argentina and Brazil.

There are several important cities, however, though they are not so large as those of Argentina and Brazil. The two most important ones are Santiago, the capital, and Valparaiso, the chief seaport.

The opening of the Panama Canal did much to help Chile to become an important commercial country. It also benefited the United States by making it possible to send manufactured goods more quickly and easily to Chile than to the countries on the east coast. There is now a cable service from the United States to Chile, which since its installation has made it possible to order goods and have them delivered in 30 days.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*ALLEN, NELLIE B. South America. Ginn and Company, Boston, 1918. A good reference. Chapter V (A Great Country and its Great Capital [Brazil]), Chapter VII (A Visit to a Coffee Plantation), Chapter IX (The Argentine Republic and its "City of Good Airs"), Chapter X (Cattle Ranches and Wheat Fields), Chapter XIII (Over the Andes to Chile), Chapter XIV (Chile and the Chileans), and Chapter XV (Deserts and Desert Products).

*BOWMAN, ISAIAH. South America. Rand McNally & Company, Chicago, 1915. Chapter IV (The Argentine), Chapter V (The Valleys of Central Chile), Chapter VI (The Coastal Desert of Chile and Peru), and Chapter XII (Brazil: the Country of Many Interests).

LEFFERTS, WALTER. Our Neighbors in South America. J. B. Lippincott Company, Philadelphia, 1927. An interesting book, telling of the people, the land, the products, and the cities of South America.

*WHITBECK, RAY HUGHES. Industrial Geography. American Book Company, New York, 1924. A good reference. Chapter XVI (The Countries of Western South America), Chapter XVII (The Countries of Eastern South America).

WILLIAMS, ARCHIBALD. The Romance of Modern Engineering. J. B. Lippincott Company, Philadelphia, 1921. Chapter X (The Loftiest Railway in the World) describes one of the world's most remarkable engineering achievements.

*WILLIAMS, ARCHIBALD. The Romance of Modern Exploration. J. B. Lippincott Company, Philadelphia, 1910. Excellent reference. See Chapter XXIII (Among South American Forests) and Chapter XXIV (Furthest Skywards [the Andes]).

Magazine Articles

*"Buenos Aires and River of Silver," *National Geographic Magazine*, October, 1921, pp. 393–432.

"Land of the Broad Horizon," *Travel Magazine*, April, 1923, pp. 31–35.

*"Rio de Janeiro, in the Land of Lure," *National Geographic Magazine*, September, 1920, pp. 165–210.

"Untouched Wealth of Brazil," *Literary Digest*, September 16, 1922, p. 20.

"Brazil Yesterday and Today," *Current History Magazine*, July, 1923, pp. 659–668.

*"A Longitudinal Journey through Chile," *National Geographic Magazine*, September, 1922, pp. 219–273.

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UNIT XII

SUMMING UP CHANGING CIVILIZATIONS IN THE MODERN WORLD

SUMMING UP CHANGING CIVILIZATIONS IN THE MODERN WORLD

Throughout this book we have tried to understand how the other peoples in the world live. We have studied how they work, how they get their food, clothing, and shelter, and how they transport things and communicate with each other. We have tried to understand the standard of living of the people of each country.

In every chapter of the book we have described countries as either industrial or agricultural. Four examples[1] *have been studied of civilizations that we have called industrial — Great Britain, France, Germany, and Japan. Two of these countries, Great Britain and Germany, have adopted machines; that is, have become industrialized much more than the others. Japan is still in the process of changing rapidly from an agricultural to an industrial country. These four and the United States are known as the leading industrial countries.*

Six countries — India, Russia, China, Argentina, Brazil, and Chile — have been taken as examples of agricultural countries. In each of these, of course, many of the features of industrial countries can be found in occasional cities and towns — such features are factories and power-driven machines, railways, and electrical communication. There are banks and stores, automobiles and telephones. Taken as a whole, however, these countries are known as agricultural countries.

With the ten examples which we have studied in the book, therefore, we are now ready to sum up what we have learned concerning other countries of the world. What is it that distinguishes an industrial country from an agricultural country? Are there real differences between the standards of living in industrial countries and in agricultural countries? Have the people in industrial countries more and better houses, clothes, or food than those in agricultural countries? Have they more time for leisure? Are their recreations more varied? Do they enjoy different things?

These are the questions that we shall strive to answer next. To do so we shall review carefully what we have already learned from the study of the separate countries.

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[1] In *An Introduction to American Civilization* we studied the fifth important one —the United States.

CHAPTER XXV

CONTRASTS BETWEEN INDUSTRIAL COUNTRIES AND AGRICULTURAL COUNTRIES

In this book and in *An Introduction to American Civilization* the chief modes of living of eleven countries have passed before our eyes. We have seen more than 1,000,000,000 human beings struggling to get a living. Each people has developed its own ways of getting food, of building houses, and of making clothing. Each has its own means of transportation and of communication. Each has its own kind of trade.

These characteristics, taken together, make each country different in some way from every other one. Great Britain is not like Germany, even though they both propel land, water, and air vehicles by means of engines, manufacture goods with machines, and transport them by means of trains, trucks, and steamboats. In many respects both are unlike either France or the United States or Japan, which do the same things. We have called these countries industrial, yet each one has its own peculiar way of living. Ours is *American*; theirs is *British*, or *French*, or *German*, or *Japanese*. Correspondingly Russia, India, China, and the A B C countries of Latin America are different from one another, although each is really an agricultural country.

What are the Real Differences between Industrial and Agricultural Countries?

We have found many ways in which industrial countries are like one another; also many ways in which agricultural countries are alike. We have said that there are fairly clear differences between *industrial civilizations* on the one hand and *agricultural civilizations* on the other. In this book we have illustrated the differences many times. One of your most important tasks is to understand these differences. Only by understanding them can one understand the changing civilizations of the modern world. Of course no one understands *all* the differences or similarities of the various civilizations, but some of them may be understood.

Our next task is to summarize our present conclusions concerning these two chief modes of living, namely, (1) the *industrial* and (2) the *agricultural*. In the next few pages we have brought together examples of the two. Before reading and discussing these turn back through the book, trying to enumerate the chief contrasts between industrial and agricultural countries.

1. Man's power aids

a. In agricultural civilizations

The muscles that lie hidden under the weather-beaten skin of peasants, muscles in the straining necks and legs of patient animals — these do the work that feeds millions of people the world over. A Chinese peasant sweating under a hot sun lifts a little rice plant from a clump and, stooping, places it in the muddy water. Again and again he bends and stoops, working in the water all day. How small a quantity of rice he will get for all his persevering work!

A barefoot Russian woman weeds a potato patch, picking off the shiny potato bugs that may make all her work in vain. Straining up the slippery bank from the warm stream, she carries a pail of water to her husband, who is cutting the rye. She knows the small power in tired muscles. We who buy our food at the corner grocery speak of the "price" of canned asparagus or hulled rice. We mean the price in money. Think of what food can cost in human work and muscles!

b. In industrial civilizations

Mechanical power! By means of powerful engines one man riding behind a gasoline engine through evenly furrowed fields can plant, cultivate, and harvest the food for many people.

Mechanical power! One man guides the course of a great steamer, carrying food to people far across the world. Another controls a train bearing 200 human beings to their destination. A third turns a switch and lights the lamps of a hundred cities.

2. Tools versus machines in doing man's work

a. In agricultural civilizations

A peasant with a hoe hacks away at the baked earth, lest the hot sun's rays dry up his bean plants. One hoe in the hands of a man working against the fierce rays of a sun mercilessly hot through the summer season!

A woman washes the dirty, oily wool from the sheep and hangs it to dry. She combs it, and cards it, and pulls it out into yarn; she weaves it on a simple loom. Finally, she sews it by hand into a shirt for her husband. Woe be unto him who tears it, this article of clothing that has taken the work of days to make.

If everybody works hard, there is enough food and clothing to keep people from starvation, from freezing to death, or to tide them over the frequent droughts.

Tools must be kept busy by many muscles to stave off hunger and cold, famine and disease.

b. In industrial civilizations

The power-driven machine moving through a smooth field cuts, swiftly and cleanly, a wide swath of grain, tucking it into bundles, tying it, and dropping it in great piles. A snorting threshing machine takes in the neat bundles of sheaves. It dumps the grain kernels into a bag, and blows the stems and hulls aside. Machines do much of man's farming for him.

Machines make men's clothes for them. They clean and dry the wool. They card and spin and weave it; they make it into cloth. They dye and cut it and sew it into garments.

Machines clean and cook and can vegetables. Machines make wood into paper, and print many books and magazines.

In an industrial country machines do much of man's work; they do much more work than man alone could do, and do many new kinds of work that man could never do.

3. Transportation and communication

a. In agricultural civilizations

People do little moving in an agricultural country. The Russians and the Chinese transport things in rowboats or sailboats.

The pack peddler and the traveling merchant carry things on their backs. The peasant rice-farmers carry their produce on their backs or slung on poles between two men. Oxen pull loads over hills and valleys, jolting steadily along till an axle breaks or a wheel gets sunk in the mud. Ladies may move in hand-carried chairs or in cumbersome coaches drawn by horses, but this kind of travel is only for the wealthy.

Communication is no faster than a man can travel on foot or be carried by a horse.

Distances are great; journeys are laborious. It is much simpler to stay at home and to live on the produce of the neighborhood than to long for things that lie beyond the hills. Thus each community tends to be a little world in itself.

b. In industrial civilizations

Count up the many kinds of transportation. There is transportation of people by train, automobile, boat, airplane, motorcycle, street car, elevator, interurban car, automobile bus, subway, and elevated electric line. There is transportation of goods by freight train, truck, traveling crane, steamboat, and elevator.

Count up the kinds of communication. One can send written messages by fast train or by airplane; one can send messages by telegraph, by telephone, or by radio.

Transportation and communication are easy in industrial countries, not only between city people but with people living off on farms and in remote spots of the earth.

Today people in industrial countries do not live out of touch with the rest of the world. The whole world is familiar and seems close at hand.

4. Raw materials

a. In agricultural civilizations

People who do not move about and who carry on little trade use the materials they find at hand to supply their needs.

For their clothing, where the climate is warm, they may weave rice straw, flax fiber, or silk. In colder climates the skins of animals or the fleece of sheep will serve.

Materials for the house? The wood of trees is sawed and planed. Mud is used, or brick made from dried mud and straw. Of these, houses are made.

Heat for the house? Usually from wood; sometimes, as in Russia, from peat or dried manure.

From what are metal tools made? There are few metal tools, and these are with great effort hammered from bits of metallic ore.

The raw materials used in an agricultural country are few and simple.

b. In industrial civilizations

Many metals and other materials are necessary to industry — iron, copper, tin, aluminum, cement, etc. Many of the necessary materials do not occur in abundance, and not many are found in any one place. These must be assembled from distant places to build the machines of industry. Cotton, silk, wool, hemp, chemicals, rubber, silicon, wood,— an almost unlimited number of raw materials are necessary for manufacturing.

Our clothing may be made of wool or silk from one continent and dyed by chemicals from another. Our shoe soles of rubber come from a third continent and are mixed with materials from a fourth. Our so-called silk handkerchief may be a mixture of wood and metal from widely separated lands. Only the expert can tell from what raw materials many of our most common products are made.

Send us raw materials, and plenty of them, from all over the world, is the cry of industrial civilizations.

5. The crowding together of people

a. In agricultural civilizations

People are crowded along the Ganges River in India. People are crowded along the Hwang and the Yangtze in China. In these fertile regions where crops grow abundantly agricultural peoples settle as densely as they can.

Where land is less fertile and water supply is less certain, people must live in more scattered groups, as they do on the steppes of Russia or on the deserts of China.

Where people are crowded together many are born and many die. Where modern science and sanitation are unknown disease sweeps through the crowded homes. Famine follows drought and brings death.

In less crowded regions people have plenty of air and plenty of room, but they live off by themselves in a world often no larger than their own firesides. To be strong and well, but lonely and lacking in comforts, is often the lot of these people.

b. In industrial civilizations

People in industrial countries flock to the sources of power — to coal, oil, or water power — and to the raw materials of industry. They settle near good harbors, in river valleys, and at other spots where easy transportation makes trade good.

Waterfalls brought factory settlements to New England. Coal and iron mines brought steel plants to Manchester in England and to the Ruhr valley in Germany. A magnificent harbor brought a great trading settlement to the island of Manhattan in the Hudson River, to Liverpool, to Hamburg, and to Bremen. People have crowded around factories and mines, and the population has increased at astonishing rates.

In industrial countries scientists have made it possible for people to live close together in considerable comfort and safety. They have found ways of stamping out some plagues and of making epidemics less terrible. Scientists have made it easier for people to keep clean and well. Fewer people die, and the population multiplies rapidly.

6. Home crafts versus factory large-scale production

a. In agricultural civilizations

Few goods are made outside the home. A family may make its own cloth and its own tools. The man of the family may cobble the shoes and build the house. The woman dries the vegetables and fruits, stores the food, and prepares it. Each household is in itself a manufacturing plant, a storage warehouse, and a market. How few things are made! How proud the craftsman is of each thing he makes!

Even where craftsmen have shops of their own for making shoes, plows, harness, horseshoes, cloth, or swords, they and their helpers work together much as father and son or as farmer and "hired man."

Throughout agricultural countries small shops or cottage industries supply the few things people require.

b. In industrial civilizations

Many things are made by machines in factories, and in large quantities. The actual making of goods ceases to be difficult when it is done by machines.

But factories are expensive to build and to equip. Raw materials obtained in great quantities from across the world require large sums of money. Large-scale production can be carried on only by corporations with vast amounts of capital.

Thus the money necessary to build the factory, to buy the raw materials, and to transport and distribute the finished article grows increasingly important. Very few people are rich enough to build their own factories. People who have money form corporations. People who lack capital work in the factories for wages.

So many people working together have to organize: there are many departments of work and many divisions of work within each department.

Thus making goods eventually becomes very complicated and interdependent.

7. Trade: local or world-wide?

a. In agricultural civilizations

One may borrow an egg from a neighbor or buy a piece of cloth from the general store or get a plowshare from the blacksmith, but for the most part one is independent even of one's neighbors. Trade is local, and much of it is done by barter.

People trade with outsiders only to get things which are rare or unusual in the country. Things from the outside are too expensive to buy. Only the finest work of craftsmen or rare stones or metals are worth all the trouble required to transport them.

For the most part people live on what is near at hand, and there is little trade.

b. In industrial civilizations

In an industrial country the farmer buys factory-made clothes; the mine worker buys his food. In order to supply everybody with things made in different places, a great deal of trade is necessary. Wholesalers, retailers, middlemen, bankers, stockbrokers, advertisers — all are busily at work keeping trade going. Salesmen travel to every country, city, town, and village, selling goods.

"Buyers" too are sent over the world, especially to buy things, though some "buyers" are paid to go out just to make investigations and reports as to whether people can be depended on to buy things or not. Trade! Trade! Trade! The whole industrial world depends on constant buying and selling.

If this trade should stop, disaster would follow: big plants would cease working; millions of people would be out of work; it would be impossible for anyone but the farmers to live, and even they would soon be reduced to primitive hand farming.

8. Necessities and luxuries

a. In agricultural civilizations

Necessities in the Far East may be enough food to keep one up and working; a bowl and chopsticks for eating it, and a simple cooking vessel; tea to drink; a hat to keep off the sun; some garment to give an air of being clothed. A luxury which may be almost a necessity? A piece of jade! Most people have some sort of house, but even persons who lack shelter may have a jade bracelet.

A peasant family throughout the less industrialized parts of Europe may look upon the following as necessities: a cow, some chickens, a house, some simple garments good for wear year in and year out. They have a combination house and stable, where the family and the live stock take shelter together. Furniture is simple and homemade. A fireplace furnishes a sort of heat for one room in coldest weather. Perhaps there will be a wooden floor, and perhaps not. The food is very simple; though if the peasant is French his sour wine is a necessity, just as tea is to the Russian or to the Chinese peasant.

b. In industrial civilizations

People have many wants and these increase in number constantly. Who would have wanted an airplane 20 years ago? Who would have wanted an automobile 50 years ago? Yet automobiles are regarded as necessities by rural and suburban families today, and airplanes may be regarded as necessities tomorrow.

Eyeglasses, fillings in our teeth — these are necessities. Yet imagine a Tibetan farmer thinking about getting a molar filled! Sanitary toilets are a necessity in our cities; we take them for granted. Yet in all native China or India or Russia or Persia there are almost none. Some sort of house-lighting is a necessity, and kerosene lamps are really very old-fashioned. To many of us it would be a hardship today to go without books, baths, sugar, letters from home, or handkerchiefs.

In industrial countries people tend to feel that to be contented they need more and more things; with each article which is added to the list of necessities we say their standard of living rises.

YOU SHOULD SUM UP WHAT YOU HAVE LEARNED ABOUT STANDARDS OF LIVING IN DIFFERENT CIVILIZATIONS

Think now of the ten countries you have studied in this book. Which have been the most completely industrial? which the most completely *agricultural and handicraft*? In which do the standards of living appear to be "highest"? In which are they "lowest"?

One conclusion is clear: the countries we have studied illustrate all kinds of civilizations, from the almost completely industrial kind to the almost completely agricultural-handicraft kind.

1. The industrial countries

At the one extreme is the very highly industrialized country of Great Britain. Four out of five of her people live in cities or towns, work in factories and stores, operate trains and other kinds of transportation, dig in coal and iron mines, sell goods around the world, study science and use scientific knowledge in every part of life. Great Britain, we learned, is even more completely industrialized than the United States. Most important of all, we found that Great Britain is very dependent on other countries for food, for raw materials, and for trade.

At the other extreme is the agricultural-handicraft country of China. Practically all her people are living in villages, engaged in farming or handicrafts. Few people are working in factories. There are few trains, paved cities, automobiles, telegraphs, or telephones. The Chinese, we found, are almost self-sufficient. Their lives depend very little on other people's.

Between these two extremes other countries of the world now arrange themselves in our minds as follows:

1. Germany, like Great Britain, very much industrialized; becoming dependent for her existence on other countries.
2. France partly industrialized and partly agricultural-handicraft; almost able to provide for herself.
3. Japan rapidly adopting machines in her cities; today fast becoming industrialized; still partly an agricultural-handicraft country.

Four of these ten countries, therefore, — Great Britain, France, Germany, and Japan, — could be called *industrial* countries. With the United States they comprise the leading industrial powers of the modern world.

2. The agricultural countries

The other countries of the world resemble China much more than they do Great Britain and the industrial countries.

1. Russia, the awakening agricultural giant: millions of its peasants struggle with their wheat land for a meager living, as the Chinese struggle with their rice land. Russia too is slowly changing, however. Factories and machines are entering Russia's cities. Machines are very gradually coming into use on her larger farms.
2. India: millions of peasants living in their countless villages.
3. Argentina, Brazil, and Chile: the Latin American and Indian peasants of these countries produce large quantities of the world's coffee, wheat, meat, and many of its raw materials. But parts of the new world of South America are beginning to give up their primitive agriculture and handicrafts. Modern cultivating and harvesting machines are coming into the great wheat farms of Argentina. Machinery

is helping do the work of men in the mines of Chile. Modern appliances load and transport the huge exports of South America. Latin America illustrates the changing civilizations; it is already partly industrial.

4. Through your individual and committee studies you have also had glimpses of life in the smaller countries of the earth. A few of these, especially Belgium and Italy, are rapidly becoming industrialized. But in most of them the people depend on agriculture and handicrafts for their living.

Although we have indicated that certain countries are agricultural and certain others are industrial, this does not mean that one nation cannot be both. The United States, as we have seen, is both industrial and agricultural.

France is certainly both agricultural and industrial. It too uses machines on its larger farms and in its many factories, but much of its work, both on farm and in shop, is done with hand tools.

The same is true of Germany, of Japan, and of other countries which have adopted power-driven machines with which to do their work. In Great Britain there are still many people living and working on farms. You see that even a highly industrialized country may be partly agricultural.

To understand how a people live it was necessary first to study them at their work

In both the agricultural and industrial countries of the world we have studied the people at their work. Over the entire earth most people have to earn their living. The greater part of their waking hours is devoted to work. Work plays such an important part in life that it determines largely what people think and feel about life. More than any other single thing it determines *what they are.*

Of course, to understand completely the civilization of a people we should study other things about them than the way they work. Work is work the world over, but what people get in return for their work is what really determines the standard of living; not just what they get in food, in houses, or in clothing is important — other things count as well.

Really to understand the civilization of a people we should learn how they use their leisure time — what their recreations are. We should learn what they do in spare hours in the evenings and on holidays. We should hear their music, see how they arrange and decorate their homes, and watch them at their dances and festivals. We should read their poetry, see their paintings, their sculpture, and their plays. We should listen to their conversation when at work and at play. We should try to understand how they feel about their own way of living.

In this book we have already tried to give you a glimpse of some of these things. We have tried to give you some idea of the way each people lives. We have tried to show what each people values most.

To do so completely would have taken the space of another volume, perhaps of several volumes. All these aspects of the civilizations of the world we shall have to leave, therefore; for there is insufficient space in this book to do much more than see clearly how people work, how they get a living.

The Change from Handwork to the Use of Power-driven Machines is beginning to be World-wide

So we return to the main idea of our studies, namely, that the civilizations of the earth are changing. Certain of these civilizations especially are changing because they are adopting power-driven machines and scientific ways of thinking.

Do the people of Asia, Africa, and South America like these new ways of living? Does the East Indian want to give up his spinning wheel and hand loom? Does the Russian peasant want tractors and reaping machines? Does the Chinese want steel mills, trains, telegraphs, and radios?

To the brief considerations of these questions we shall turn in the next chapter.

AN INTERESTING BOOK FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Whitbeck, Ray Hughes. Industrial Geography. American Book Company, New York, 1924. Chapter XXXIII (Chief Producing Regions and World Trade).

CHAPTER XXVI

CHANGING CIVILIZATIONS IN THE MODERN WORLD

The narrow world of all peoples before the Industrial Revolution

You remember how narrow the world of the Europeans was in 1100. It hardly went beyond the manors on which they lived.

The world of the Mongols and the Chinese was just as "narrow" as that of the Europeans. They also lived largely in ignorance of other peoples.

South of the Himalaya Mountains was a third shut-in civilization, the civilization of the Indian peninsula.

Utterly unknown to these three civilizations were those on the continents now called North America and South America. It was difficult for the Europeans of the later Middle Ages to understand that people totally unlike any they had ever heard of lived in Central America and South America.

Indeed, throughout many thousands of years people have lived by themselves within their own river valleys, shut in by oceans or mountain peaks. No one knows for how many years tribes, clans, and "nations" developed their own ways of living.

The Europeans used their scientific knowledge in all the continents

We know that some of these earlier civilizations were not without scientific knowledge. Both the Chinese and the Indians of Central America and South America, for example, had ways of recording time. They knew how to count the days of the year, the month, and the week. We believe that they had compasses and other instruments for navigation, and we know that they used astronomical instruments.

When the Europeans invented these things for themselves, however, they did not use them merely within the boundaries of their own narrow world. They applied them to the exploration of the whole world. They daringly sailed their ships around the coast of Africa to India and China. They sailed into the unknown west and discovered North America and South America.

What they found

Everywhere the Europeans encountered some kind of established civilization. In all of South America they found Indians who centuries before had built cities and roads. In India they encountered an ancient well-developed civilization of many tribes of people. In China they found still a different civilization. The Chinese had communities and knew how to build structures out of stone and other materials. They knew how to make silk, how to weave beautiful fabrics, how to make paper, and how to write and print. They made pottery. Their weapons, implements, and tools were of metal. Each civilization had its own language, its own government, its own ways of living.

The Europeans found that each of these peoples had valuable things which they wanted. The Asiatics had pepper, silks, jewels, and tea. The American Indians had gold and silver, and they knew how to grow "new" foods. Because the Europeans found things that they wanted in these distant civilizations, they built up a large trade with each region. Their desire for these things led them to continue to travel to distant places.

Trade developed and settlements were made

Gradually the Europeans settled in the new regions. Some of them built permanent homes there and set up their own kinds of government. The British settled Canada and what is now the United States. They also developed farms and mined gold and silver in Africa. They went out to Australia and built up sheep ranches and great wheat farms. The Spanish and Portuguese built empires in Central America and South America.

After 1600 the Europeans spread their civilization around the world. In every continent they established settlements, built cities and railroads, and mined coal and iron. In addition they introduced their own language and customs.

Today the sun never sets upon Europeans. As a result of their exploration and settlement of the entire earth millions of Europeans or their descendants are to be found in every continent.

EUROPEANS HAVE INTRODUCED THEIR CIVILIZATIONS ALL OVER THE WORLD

What urged the Europeans onward?

What was it that drove the Europeans onward? What caused them to settle the wilderness of North America and South America? What caused them to brave the dangers of the unknown Atlantic?

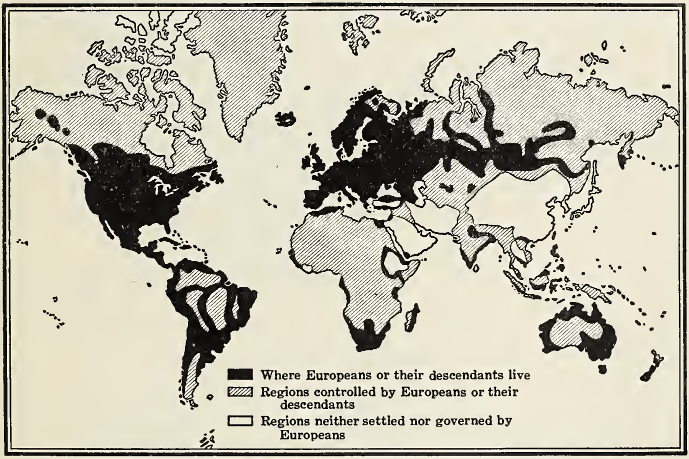
■ Where Europeans or their descendants live
▨ Regions controlled by Europeans or their descendants
□ Regions neither settled nor governed by Europeans

FIG. 252. With the help of the key in the lower part of the map you can see the parts of the earth which Europeans or their descendants inhabit today and many other regions of the earth which they control

Of course there were several important reasons. Some went for adventure, some for love of country, and some went because they wanted to be free to worship God as they pleased and to rule themselves.

But no reason was more important than that of the desire for a better living — for better land, for surer crops, and for wealth with which to protect old age. It is these things that we have in mind when we say that the Europeans exceeded all others in *trade*. They themselves manufactured many kinds of goods. Then they sold these goods to the peoples of every continent. In turn they bought the things that they wanted. The reason for all this trade was practically always the same — a better living, a higher standard of living, for themselves.

WHAT HELPED TO DETERMINE WHERE EUROPEANS SETTLED?

The weather and the condition of the land

Now we can understand more clearly the points that we made in Chapter I in discussing where people live and why they live there. We asked: Why is it that five sixths of the population of the earth live in three dense centers of population? Why do people not live in the cold ice land, in the deserts, in the tropical jungles, or in the high mountainous places?

We have answered the question many times in this book. Most people of the earth prefer to live where nature does not go to extremes, where nature is temperate. They settle where it is fairly easy to get a living.

How well our studies of this important problem are summed up by the maps of figures 1 and 253. In the first chapter we answered our questions by saying that "the weather and the condition of the land" determine where people live.

First, compare the temperature map of figure 255 with figure 252, the map showing where large numbers of Europeans have settled. Notice that in general the Europeans live in the *north temperate* or *south temperate* zone, where nature is not extreme. How well does the temperature map of figure 255 bear out that conclusion?

Second, compare the rainfall map of figure 254 with the map of European settlement, figure 252. Again our answer is checked by the facts shown on the maps. The Europeans have developed most of their civilizations in the zones which have a moderate amount of rainfall.

Third, compare the vegetation map of figure 253 with the map of European settlement, figure 252. Have the Europeans settled in the ice land? Are they numerous in the hot tropical

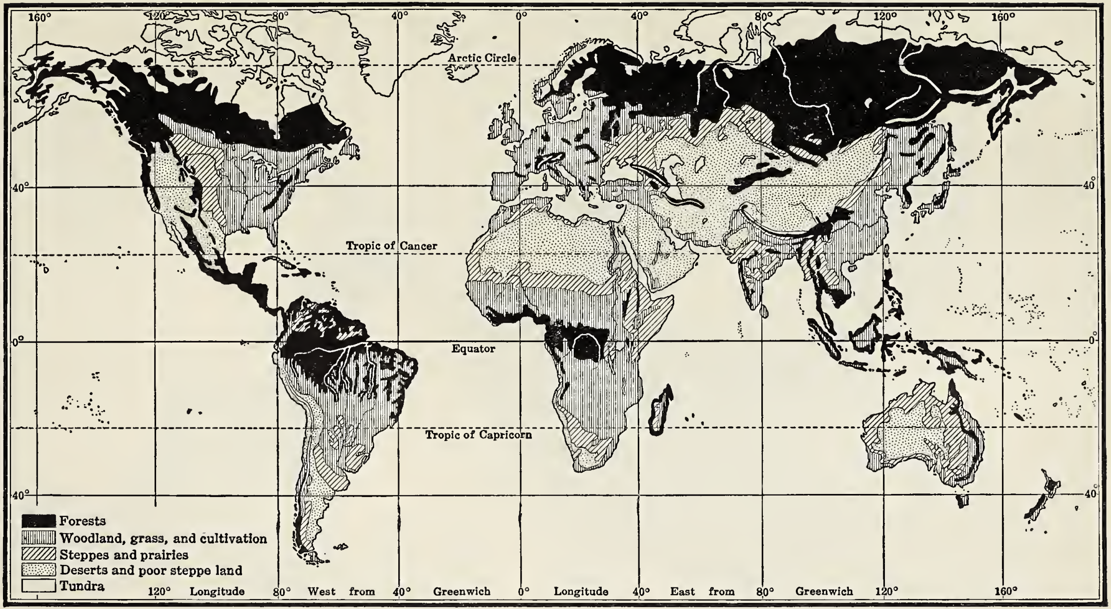
160°
120°
80°
40°
0°
40°
80°
120°
160°
Arctic Circle
Tropic of Cancer
Equator
Tropic of Capricorn
40°
0°
40°
40°
0°
40°
Forests
Woodland, grass, and cultivation
Steppes and prairies
Deserts and poor steppe land
Tundra
120° Longitude 80° West from 40° Greenwich 0° Longitude 40° East from 80° Greenwich 120° 160°

FIG. 253. With the help of the key in the lower left corner of the map can you tell the proportion of the earth's surface which is fertile today? Does the map help you to understand why some regions are densely populated and others scantily peopled?

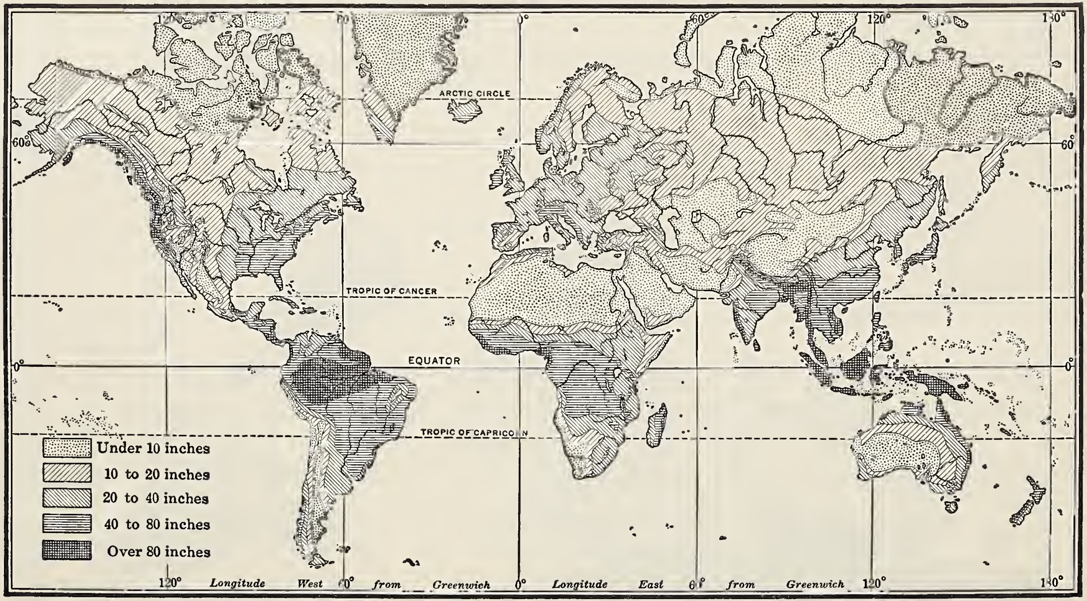
ARCTIC CIRCLE
TROPIC OF CANCER
EQUATOR
TROPIC OF CAPRICORN
Under 10 inches
10 to 20 inches
20 to 40 inches
40 to 80 inches
Over 80 inches
120° Longitude West 60° from Greenwich 0° Longitude East 60° from Greenwich 120° 180°
60°
0°

Fig. 254. This map shows the distribution of rainfall over the land area of the world. Does this help you to account for the kinds of products which are grown? for the amount of products? for the density of population?

jungles? in the deserts? in the mountains? Some live in these regions, but not many. A considerable number have built ranches where sheep and cattle have grass upon which to graze. Others are living where timber can be cut from the forests. Many more have settled where wheat, rye, corn, and other grains can be grown from the soil. But very few have gone where vegetation is scarce or soil is not fertile. People settle where living is easiest.

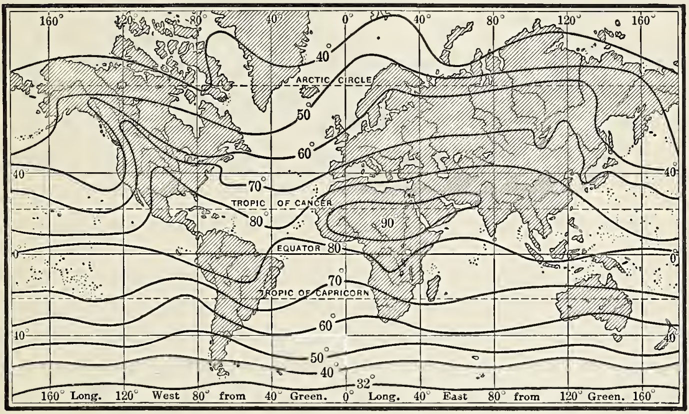
160°
120°
80°
40°
0°
40°
80°
120°
160°
40°
ARCTIC CIRCLE
50°
60°
40°
70°
TROPIC OF CANCER
80°
90
EQUATOR
80°
0°
70°
TROPIC OF CAPRICORN
60°
40°
50°
40°
32°
160° Long. 120° West 80° from 40° Green. 0° Long. 40° East 80° from 120° Green. 160°

FIG. 255. The heavy lines on the map and the figures indicate the average temperature in July of all the regions in the world

These then are the natural conditions that influence where people live. Men did not produce these conditions. Nature — in the form of rainfall, temperature, vegetation, soil, and "lay of the land" — produced them. Large numbers of men went to live only where the conditions were most favorable.

But Europeans advanced in their control over nature

The Asiatics, the American Indians, and the African Negroes had accepted natural conditions much as they found them. For a long time the Europeans did too. But after 1600 they used their scientific knowledge to change the natural conditions. By that means they could get a better living than nature alone provided. The Europeans learned to irrigate the desert. They built dams and stored up water to use in dry seasons. They learned to rotate their crops and to provide the proper nourishment and rest for the soil. They learned to use and make fertilizers and to mix them with the soil in the right proportions to raise good crops. Few of these aids were *devised* by Europeans, but they learned about them and applied science to the improvement of them.

With their scientific knowledge they learned how to live more comfortably in spite of the changes in temperature. For example, they learned how to build houses well protected and heated, so that they could live in cold regions. They learned how to make clothing to keep them comfortable in all weathers. They invented methods of refrigeration, so that perishable foods could be preserved while they were being transported over long distances.

Their chief advance was by means of the Industrial Revolution

Perhaps the most important single thing the Europeans learned was to invent ways of making mechanical power and engines. Many civilizations had used water wheels and windmills. But for tens of thousands of years men had been their own beasts of burden. Their muscles and those of animals had done most of the work of the world.

Then after 1700 the Europeans devised engines and machines. They discovered electricity. They learned of the chemical make-up of the world. By means of these new inventions they increased their powers tremendously.

With the mechanical power, the chemistry, and the machines they revolutionized ways of producing food and of making clothing and shelter. They learned how to make transportation rapid by building railroads, automobiles, and airplanes. They learned to send words over wires by telegraph and telephones. Later they even sent messages through the air without using wires, by radio. We call this period of time the Industrial Revolution.

But engines would not run without coal, or oil, or moving water. So the Europeans learned to prize greatly the earth's resources. Deposits of coal, underground lakes of oil, and the many mountain streams which could be dammed to make hydroelectric power — these became of greatest importance.

Because the coal and oil could be transported to their industrial countries, the Europeans searched the earth for them. They tried to secure possession of land that contained them. Coal and oil land became as important as good farming land.

In these ways, therefore, the Europeans advanced in their control over nature. They learned to live not only where nature was temperate, but also to change the natural conditions which they found.

THE SPREADING OF EUROPEAN CIVILIZATION HAS CHANGED THE FACE OF THE EARTH

The Industrial Revolution is not only continuing, it is speeding along more rapidly than ever. It is beginning to affect even those few places on the earth today which are not controlled by the Europeans.

We have seen how many regions have changed. Ancient Japan has recently adopted power-driven machinery. She has developed a modern army and navy. Her merchant ships trade around the world. She mines coal and iron in China and operates railways and other industrial enterprises in Manchukuo and Korea. We have seen the British in India building thousands of miles of railways.

China too is changing. Coal is being mined. Industries are growing in cities. Textile mills and iron and steel foundries have been established. From Cairo to Cape Town, Africa is now being transformed. In every continent civilizations are changing.

Peoples are not only changing in their ways of making things and transporting things, but they are changing their customs, their recreations, and their outlook on life as well. For example, in many countries men and women are adopting the dress of the European.

But the spreading of European civilization means more than the adoption of one kind of dress, recreations, etc. It means the spreading of new ideals as well. Education for all people is one of the most important of these ideals. In Russia, China, India, and many other places schools are being established for grown-ups who are unable to read and to write, as well as for little children.

Governments are being changed rapidly, too. One emperor, one king, one autocratic government after another has been overthrown in recent years. For example, in 1783 the American colonies threw off the control of England and established the United States of America. In 1792 the French people freed themselves from their royal masters and set up a republic in place of the old empire. In the 1800's twenty Latin American republics rose out of the great Spanish and Portuguese empires of South America. In recent years the Chinese have overthrown their Manchu rulers, the Russians have got rid of their Czar, and the Germans have exiled their Kaiser and put a president in his place. There still remain countries in which emperors and kings rule, but even in these the people have much more power today than they had before modern civilization developed.

All these things, then, have gone on together: (1) the increase in scientific knowledge; (2) the discovery of how to control nature through engines, machines, chemistry, and electricity; (3) the spreading of universal education and Western customs; and (4) the spreading of greater freedom in government, of more self-rule.

In brief, all these things working together are raising standards of living all over the world. In some countries standards of living are rising rapidly; for example, in the United States, Germany, France, and Great Britain. They are rising more slowly in central Europe, in Africa, and in Latin America. Most slowly of all, changes are coming in China, in interior parts of Asia, and in isolated portions of Africa and South America. But all are changing. All are being influenced by the spread of industrial ways of living.

How do Other Peoples like the Spreading of European Civilization?

The leaders are divided as to whether they should adopt Western ways

Two groups of leaders in Asia are rapidly learning the ways of the West: (1) the young students and (2) the progressive business men. We shall see first the attitude of the young students.

The young students of Asia want to adopt the European civilization

For the most part the young students of Asia are eagerly learning the ways of the West and are urging their native people to adopt them. They have seen the improved health and higher standards of living of Western countries and want the same thing for their own people. They believe in using machines, in standardizing manufactures, and in producing goods on a large scale. A growing group of young Chinese, Filipinos, Indians, Siamese, Persians, Turks, and Egyptians wants to turn their agricultural and handicraft civilizations into industrial ones.

These students are not afraid to try out the new methods of doing things, which they feel are in many ways superior to their own. They have before them the example of Japan, which, after rapidly learning industrial ways, took her place among the powerful nations of the world. The example of Japan has had a great effect on some of the people of China and other non-industrial countries of the East.

The old people of China said about Japan's taking up of machine industry, "He who rides a tiger cannot dismount." They did not want the Chinese to start industrializing themselves and then to find out, only when it was too late to stop, that they did not like it. The new group is different. It says, "Look at Japan! Let us be like her!"

The spreading of Western kinds of education

Many of the young people of Asia are receiving a modern education. Consider what is happening in China. For thousands of years the students of China spent their time memorizing the writings of their scholars of long ago. Nowadays the young Chinese are turning from the study of these ancient writings to making experiments in science, to the study of engineering, of teaching, and of scientific management in industry and business.

This new study of "Western science" began right after the Chinese Boxer uprising in 1900. For example, when the United States returned to China a part of the indemnity money China decided to send carefully chosen young men to the United States to be educated in American schools and universities.

Soon the Chinese students began to come to America. Steadily, year by year, the number increased. These students went into the colleges and professional schools of the United States. Many of them became engineers. They studied the building of roads and railways and learned how to provide supplies of pure water for towns and cities. Some studied agriculture and learned scientific methods of irrigating land.

Then they returned to China, where they taught the older people the things which they had learned. Some of them became doctors and established hospitals. Slowly they introduced knowledge about physical health and well-being.

Many Chinese students went to the schools in Japan. They were eager to know the methods by which Japan had become a new nation.

Many more went to Europe, where they studied in the German, French, and English universities. They traveled far and wide over Western countries. They saw how roads and railways and the telegraph could help people to know more about each other. Most of these young educated Chinese began more and more to believe in the need of improving the physical standard of living of their people.

Number of Higher and Middle Schools and Students in China

Year	Schools	Students
1910	42,444	1,625,000
1919	134,000	4,500,000
1923	178,981	6,619,792

Soon new schools were established in China. Here the young Chinese were prepared for the universities. The table shows the increase in the number of students and schools between 1910 and 1923.

These students are becoming leaders in the change that is taking place.

The young students of India

The Chinese are not the only students who are learning the science of industrial countries. In India too, many students at government universities are studying the methods of engineering, of industry, and of government and trade followed by their British rulers. These universities were established to train

Indians in the civil service. Graduates of these schools become government employees.

These schools, taught largely by English or English-trained people, encourage loyalty to England and are not especially concerned with preserving Indian ways. Other schools have now been started that are nearer to the native way of life. Rabindranath Tagore's school near Calcutta is one of these. At this school the handicrafts are studied as well as economics, history, and literature. Students of the highest caste as well as of the lowest learn to till the soil and to make things with their hands.

Because of the great need for better-trained people in India, the National Education Council has established a technical institute in Bengal. The leaders of Young India feel that this new education must be made to serve the Indian people and to educate the people to be loyal to India.

Young students are leading their people in Egypt also

Back in the Middle Ages, Turkey and Egypt had an educational system that served the people of that time fairly well. In fact, at that time El-Azhar, the university at Cairo, in Egypt, was a model for schools all over Europe. There the students studied the Koran, a religious text, and prepared themselves to be priests and judges. But such a university offers few courses that prepare for life as it is today.

Today this university has over 9000 students and is beginning to take a part in the life of modern Egypt. It encourages national feeling, and its students are being taught "Egypt for the Egyptians!" Within its walls was born the Young Egypt movement.

In earlier times this university was for men only. Women in Egypt had almost no chance for education. They lived very quiet lives in their homes, neither seeing nor being seen. When they went out they wore heavy veils over their faces. They were never considered equal to men. But today! Women are leaders in Egypt as they are in progressive industrial countries. They are trying to get a better education for the mass of the people and to make homes happier and better. They are entering trade. Some of them own great cotton plantations.

The Young Turks are learning Western ways and urging them on the people

One of the first steps of the Young Turks after their revolution in 1908 was to send to European universities 100 young men. These students returned to devote their lives to the building up of Turkey.

The greater number of people in Turkey could not read or write; so it was necessary first of all to establish village schools. This was done. The old schools were repaired. New equipment was installed. Laboratories were fitted up. All the schools were to teach the Turkish language; even prayers, which had been said in Arabic for centuries, were to be said in Turkish. All schools were to follow the new Turkish customs. These have changed as have Egyptian customs. Many women are now going without their veils, wearing European dress, and sharing more in the life around them. Turkey is making herself over into a nation which resembles the nations of the West.

Progressive business men of Asia are also adopting Western methods in industry and trade

You have already read the story of the development of the Mitsui family in Japan. The manner in which this family of business men adopted power-driven machinery in their factories, built steamships, railways, telegraphs, and telephones, and sent salesmen into other countries is similar to what has happened in England, in Germany, in France, and in the United States.

Many other examples could be given of the way China, Siam, the Philippines, the Malay regions of southeastern Asia, India, and many parts of Africa are becoming "industrialized." The business men have joined hands with the young students to bring about this change.

Some leaders are unwilling to adopt new ways of living

In *An Introduction to American Civilization* you studied many instances of the unwillingness of American people to accept the new industrial developments. Some opposed the coming of the railways, others the construction of canals, still others the use of steamboats, automobiles, and airplanes. Many made fun of the telegraph, the submarine cable, and the harvesting machine. The ironmasters laughed at William Kelly for blowing air through hot iron to refine steel.

So it was in England and other parts of Europe. The charcoal ironworkers in England drove Robery Dudley out of business because he burned coal instead of charcoal. The weavers and spinners smashed the new machines. In every Western country there were many people who were unwilling at first to accept the new ways of living.

Naturally, therefore, there were many in China, in India, in the Near East, and in other agricultural regions who did not wish to use engines and machines, to have railways, or to change from the old laborious ways of working.

Some oppose the use of engines and machines because they do not know what machines can do. They do not understand them; so they fear them. In this respect they are like some of the earlier Europeans and Americans.

There are other leaders of Asia who honestly dislike this new civilization. They fear the effect that machines will have. They are afraid that they shall lose the very best parts of their old civilizations if they adopt machines.

Mahatma Gandhi of India is the outstanding leader of these people. His followers believe in making yarn with a spinning wheel and cloth with a hand loom. They would depend upon the wind and the water and the muscles of men and animals for power. They are striving hard to keep their handicraft way of working and living. They fear the industrialism of Western nations. They would rip up the thousands of miles of railway track that have been already laid down in India and depend on roads and animals and men for transportation.

Gandhi spends hours each week at his own spinning wheel. In fact he has adopted the spinning wheel as the symbol of this movement in India.

Note Gandhi's words:

> We must have government in India which will permit that our culture and way of life be paramount, that we take up our ancient handicrafts again, spin and weave and make useful and beautiful things with our hands, and that we shall stop the stench and smoke of modern

> industrialism that is creeping over our country before it robs us of our soul. The false teaching that life consists of the multitude of possessions, or comforts, or thrills, or even achievements which a man can attain, must not have the prestige of backing by a ruling class. Let the British tear up their railroads and dismantle their factories, send their armies home and stop their system of Western education in India, and above all, cease draining this country economically to feed England, then they will be welcome to stay and govern in India, for they are just judges and efficient administrators.[1]

Mahatma Gandhi wants his people to keep the best of their old civilization. He fears that they may lose this if they adopt Western ways.

Will Industrialization become World-wide?

Some people think the whole world may become industrialized. They believe that machines and engines and chemicals will be used everywhere. They believe that cities and great industrial centers will continue to spring up, and that trade will increase more and more. They believe that people will become more and more dependent on one another and will become more and more alike in language, in customs, in habits, and in ideas — that the new European civilization will spread to every corner of the world.

The civilizations of the world have been changing ever since men began to live on the earth. Our lifetime is only a short period of the world's time. It is probable that long after we have gone people will continue to change. What will the next change be? We cannot tell now what turn the march toward world-wide industrialization will take, or what will call a halt to it. Only time will tell.

INTERESTING READINGS FROM WHICH YOU CAN GET ADDITIONAL INFORMATION

Books

*Cooper, Merian C. Grass. G. P. Putnam's Sons, New York, 1925. A thrilling account of the migration of people in their struggle for food. A Persian tribe searches for grass for its live stock from deserts to mountain plateaus.

*De Kruif, Paul. Hunger Fighters. Harcourt, Brace and Company, Inc., New York, 1928.

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[1] Upton Close, *The Revolt of Asia*, p. 230. G. P. Putnam's Sons, New York, 1927.

*De Kruif, Paul. Microbe Hunters. Harcourt, Brace and Company, Inc., New York, 1926. This and the preceding book by the same author tell the dramatic stories in man's conquest of diseases through the use of science.

*Gibson, Charles R. Heroes of the Scientific World. J. B. Lippincott Company, Philadelphia, 1921. An exceptionally good book. Stories of the way in which a few brilliant men helped to make the earth a better home for mankind.

Hunt, Frazier. The Rising Temper of the East. Bobbs-Merrill Company, Indianapolis, 1922.

Hyndman, H. M. The Awakening of Asia. Boni & Liveright, New York, 1919. For rapid readers.

Magazine Articles

"Doctoring on the Afghan Frontier," *Asia*, October, 1926, pp. 886–889.

"How Asia takes to our Movies and 'Speakies,'" *Literary Digest*, April 24, 1926, pp. 36–40.

*"Map-changing Medicine," *National Geographic Magazine*, September, 1922, pp. 303–330.

*"The Warfare of the Jungle Folk," *National Geographic Magazine*, February, 1928, pp. 233–288.

*"Westernization of the East starts a Revolt," *Literary Digest*, December 15, 1928, pp. 16–17.

"Why Asia is rising against Europe," *Literary Digest*, June 23, 1923, pp. 18–19.

APPENDIX

The statistical material included in these tables[1] has been compiled from the following sources:

Fifteenth Census of the United States (1930).
Statistical Abstract of the United States (annual). Bureau of Foreign and Domestic Commerce, Department of Commerce.
The Statesman's Year-Book. The Macmillan Company, New York City.
China Yearbook for 1926. Tientsin Press, Ltd., Tientsin, China.

TABLE I. THE SIZE OF THE EARTH

Diameter of earth at equator (miles)	7,926
Distance around the earth at equator (miles)	24,900
Land area (square miles)	57,255,000
Water area (square miles)	139,685,000

TABLE II. AREA AND POPULATION OF THE CONTINENTS

CONTINENT	AREA IN SQUARE MILES (APPROXIMATE)	POPULATION (APPROXIMATE)
Africa	11,623,000	140,000,000
Asia	17,206,000	1,046,760,000
Australia	2,974,000	6,263,000
Europe	3,872,000	425,000,000
North America	8,589,000	162,390,000
South America	7,570,000	76,340,000
Polar regions	5,082,000	—
Total	57,255,000	1,856,753,000

TABLE III. WORLD PORTS IN ORDER OF VALUE OF COMMERCE HANDLED

1. New York
2. Liverpool
3. London
4. Bordeaux
5. Marseille
6. Hamburg
7. Antwerp
8. Havre
9. New Orleans
10. Genoa
11. Yokohama
12. Singapore
13. Kobe
14. Philadelphia
15. Hull
16. Manchester
17. Shanghai
18. Galveston
19. Buenos Aires
20. Montreal
21. Boston
22. Bremen
23. Calcutta
24. Glasgow
25. Bombay
26. Baltimore
27. Sydney
28. San Francisco
29. Santos
30. Virginia ports
31. Seattle
32. Habana
33. Osaka
34. Melbourne
35. Rio de Janeiro
36. Bristol
37. Tyne ports
38. Cardiff
39. Barcelona
40. Naples

[1] Where the statistics given in the tables do not agree with those in the body of the book, it is due to the fact that newer statistics were made available only after the book had been completed. These have been incorporated in the Appendix.

TABLE IV. STATISTICAL FACTS FOR 34 PRINCIPAL COUNTRIES OF THE WORLD

	Area in Square Miles	Census Date	Population	Number of People per Square Mile	Miles of Railroad	Number of Telephones	Number of Automobiles	Coal Production (Tons)	Pig-Iron Production (Tons)	Oil Production (Barrels)	Gross Tonnage Steam and Motor Ships (1929)
1. Argentina . .	1,153,119	1928 [1]	10,646,814	9	23,548	245,294	364,737	—	—	8,800,000	274,700
2. Australia . .	2,974,581	1929 [1]	6,373,219	2	26,739	476,700	581,310	—	—	—	— [9]
3. Austria . . .	32,369	1928	6,686,576	206	4,156	212,929	34,583	3,820,000	470,000	—	—
4. Belgium . .	11,755	1928 [1]	7,995,558	680	6,740	225,845	139,650	29,686,000	4,035,000	—	522,618
5. Brazil . . .	3,285,318	1928 [1]	39,103,856	9	19,796	129,829	194,000	400,000	—	—	545,695
6. Canada . . .	3,684,723	1929 [1]	9,786,800	2	55,455	1,334,534	1,168,188	17,564,293	—	624,184	— [9]
7. Chile	290,119	1929	4,364,395	15	5,246	55,545	32,996	1,482,605	—	—	157,357
8. China . . .	4,279,170	1928 [1]	451,842,000	254	9,370	50,000	35,489	16,000,000	—	—	314,638
9. Czechoslovakia	54,207	1928 [1]	14,535,429	268	8,553	126,551	58,400	18,465,000	1,600,000	—	—
10. Denmark . .	16,568	1929	3,434,555	212	3,262	331,048	100,625	—	—	—	1,032,744
11. Egypt . . .	383,000	1927	14,213,364	1,047	3,126	41,927	27,675	—	—	1,866,000	28,920
12. France . . .	212,659	1928	41,020,000	191	25,947	965,519	1,296,167	60,686,000	10,290,000	—	3,302,684
13. Germany . .	181,723 [2]	1929	63,178,619 [2]	353	36,255	2,950,430	642,500	180,158,000	13,300,000	—	4,057,651
14. Great Britain	89,041	1929	44,504,000	499	20,386	1,754,641	1,452,489	291,908,000	7,565,000	279 [5]	22,117,246
15. Greece . . .	49,912	1928	6,204,684	120	1,991	11,745	17,850	143,346	—	—	1,266,685
16. Hungary . .	35,875	1928	8,603,922	239	5,388	93,159	19,052	7,293,349	—	—	—
17. India (British)	1,094,300	1921	247,003,293	226	40,950	53,685	153,111	24,802,000	1,350,000	8,470,000	— [9]
18. Italy	119,710	1928 [1]	41,168,000	343	13,442	292,867	241,463	—	—	—	3,215,327
19. Japan . . .	145,024 [3]	1929	62,938,200 [3]	433	12,590	811,319	92,883 [7]	39,683,000	1,500,000	{ 509,000 [8] 2,010,000	4,186,652
20. Mexico . . .	767,198	1927	14,899,905	19	18,862	77,971	74,300	1,015,830	—	44,689,000	48,043
21. Netherlands .	12,603	1928 [1]	7,730,577	613	2,278	255,489	100,537	10,694,215	—	—	2,902,420
22. Norway . .	125,086	1929	2,810,592	21	2,383	181,962	41,837	—	— [6]	—	3,217,795
23. Persia. . . .	628,000	1928	10,000,000	15	231	3,713	8,327	—	—	45,250,000	—
24. Poland . . .	149,958	1929	30,408,247	202	15,117	162,079	34,806	50,989,000	—	4,953,000	36,475
25. Portugal . .	34,254	1929	6,440,000	288	2,001	29,516	28,580	—	—	—	234,886
26. Rumania . .	122,282	1919 [1]	17,393,149	139	8,744	58,398	35,982	2,636,202	70,123	34,930,000	69,521
27. Russia . . .	8,241,921	1929	154,800,000	18	48,023	300,000	24,000	37,901,000	4,000,000	103,000,000	437,109

28. Siam	200,148	1928	10,284,000	51	1,815	1,935	—	—	—	—	8,859
29. Spain . . .	190,050	1928[1]	22,601,753	113	10,138	150,000	176,075	6,793,012	—	—	1,136,326
30. Sweden . . .	173,156	1928[1]	6,105,190	35	10,378	466,787	109,522	358,513	500,000	—	1,480,189
31. Switzerland .	15,940	1928[1]	4,018,500	252	3,367	219,735	53,000	—	—	—	—
32. Union of South Africa	471,917	1921	5,409,092	11	13,419	88,113	101,200	12,168,000	—	—	—[9]
33. United States	3,026,789	1930	122,775,046	40	262,713[4]	18,200,000	23,262,183	608,983,000	42,400,000	1,006,000,000	13,591,803
34. Venezuela . .	393,874	1926[1]	3,053,497	15	644	13,000	12,560	—	—	137,000,000	41,782

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[1] Latest official estimate.

[2] Including the Saar district.

[3] Exclusive of Korea, Taiwan, Pescadores, and Japanese Sakhalin.

[4] In 1928.

[5] Tons.

[6] Production given in money values only; 1,049,000 kronen.

[7] Includes Korea.

[8] Sakhalin.

[9] Included in total for Great Britain.

Table V. Population of the Important Cities of Each Nation

1. *Argentina*

(1927) Buenos Aires	2,030,765
(1922) Rosario (Santa Fé)	265,000
(1928) Córdoba	221,000
La Plata	165,813

2. *Australia*

Sydney	897,640
Melbourne	784,000
Adelaide	255,318

3. *Austria* (1923)

(1928) Vienna	1,857,400
Graz	152,706
Linz	102,081

4. *Belgium* (1928)

Brussels and suburbs	825,783
Antwerp	300,115
Liège	169,566
Ghent	162,627
Mechlin	60,440

5. *Brazil* (1920)

Rio de Janeiro	1,157,873
São Paulo	579,033
São Salvador	283,422
Recifé	238,843
Belem	236,402
Porto Alegre	179,263

6. *Canada*

(1927) Montreal	989,835
(1928) Toronto	585,628
(1928) Winnipeg	202,377
(1928) Vancouver	149,262
(1927) Hamilton	123,359
(1928) Ottawa	122,731

7. *Chile* (1920)

Santiago	507,296
Valparaiso	182,422
Concepción	64,074
Antofagasta	51,531

8. *China* (1928)

Peiping and suburbs	1,297,718
Hankow and suburbs	1,583,900
Shanghai	2,677,100
Canton	811,800
Tientsin	800,000
Chungking	624,000
Changsha	535,800
Nanking	497,500
Hangchow	426,900
Soochow	350,000
Foochow	312,800
Wanhsien	81,100

9. *Czechoslovakia* (1921)

Prague	676,657
Brünn	221,758
Moravska Ostrava	113,709
Bratislava	93,189
Pilsen	88,416

10. *Denmark* (1925)

Copenhagen and suburbs	731,496
Aarhus	76,226
Odense	52,376
Aalborg	42,819
Horsens	28,135

11. *Egypt* (1927)

Cairo	1,064,567
Alexandria	573,063
Port Said	104,603
Tanta	90,014
El Mansura	63,676

12. *France* (1926)

Paris	2,871,429
Marseille	652,196
Lyon	570,840
Bordeaux	256,026
Lille	201,921
St. Étienne	193,737
Nantes	184,509
Nice	184,441
Toulouse	180,771
Strasbourg	174,492
Havre	158,022

Table V. Population of the Important Cities of Each Nation (continued)

13. *Germany* (1925)

Berlin	4,024,165
Hamburg	1,079,126
Cologne	700,222
Munich	680,704
Leipzig	679,159
Dresden	619,157
Breslau	557,139
Essen	470,524
Frankfort on the Main	467,520
Düsseldorf	432,633

14. *Great Britain* (1921)

London and suburbs	7,480,201
Glasgow	1,034,174
Birmingham	919,444
Liverpool	802,940
Manchester	730,307
Sheffield	490,639
Leeds	458,232
Edinburgh	420,264
Bristol	376,975

15. *Greece* (1928)

Athens	452,919
Salonika	236,526
Patras	61,278
Kavalla	49,980
Heraclion	33,404
Mytilene	27,870

16. *Hungary* (1928)

Budapest and suburbs	1,217,325
Szeged	125,039
Debreccen	108,816
Kecskemet	79,418
Hódmezövásárhely	62,445

17. *India* (1921)

Bombay	1,175,914
Calcutta and suburbs	1,132,246
Madras	526,911
Hyderabad	404,187
Rangoon	341,962
Delhi	304,420

18. *Italy* (1929)

Naples	966,423
Milan	961,979
Rome	914,631
Genoa	623,196
Turin	591,316
Palermo	447,335
Florence	316,806
Catania	281,500
Trieste	255,480
Bologna	245,036

19. *Japan* (1925)

Osaka	2,114,804
Tokyo	1,995,567
Nagoya	768,558
Kyoto	679,963
Kobe	644,212
Yokohama	405,888
Hiroshima	195,731
Nagasaki	189,071
Hakodate	163,972
Kanazawa	147,420

20. *Mexico* (1921)

Mexico City	906,063
Guadalajara	143,376
Puebla	95,535
Monterrey	88,458
Mérida	79,225

21. *Netherlands* (1928)

Amsterdam	734,404
Rotterdam	577,694
The Hague	425,119
Utrecht	151,648
Haarlem	115,497

22. *Norway* (1920)

Oslo	258,483
Bergen	91,443
Trondhjem	55,030
Stavanger	43,778
Drammen	26,204

23. *Persia*[1]

Tehran and district	350,000
Tabriz	180,000
Isfahan	100,000
Meshed	85,000
Resht	80,000

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[1] Estimated.

Table V. Population of the Important Cities of Each Nation (continued)

24. *Poland* (1921)

Warsaw	936,713
Lodz	451,974
Lemberg (Lwów)	219,388
Posen	184,756
Kraków	183,706

25. *Portugal* (1920)

Lisbon (1925)	529,524
Oporto (1925)	215,625
Setubal	37,074
Braga	21,970
Coimbra	20,841

26. *Rumania* (1914)

Bucharest (1917)	308,987
Kishinev	114,100
Cernauti	87,128
Ismail	85,600
Jassy	76,120

27. *Russia* (1926)

Moscow	2,025,947
Leningrad	1,614,008
Kiev	513,789
Baku (with industrial district)	452,808
Odessa	420,888
Kharkov	417,186
Tashkent	323,613
Rostov-on-Don	308,284
Tiflis	292,973
Dniepropetrovsk (with Amour)	233,001

28. *Siam*

Bangkok	745,640[1]

29. *Spain* (1928)

Madrid	816,928
Barcelona	767,774
Valencia	269,727
Seville	216,511
Málaga	159,479
Saragossa	155,529
Murcia	154,705
Bilbao	150,112
Granada	108,361
Cartagena (1920)	96,981

30. *Sweden* (1929)

Stockholm	474,094
Göteborg	235,994
Malmö	118,535
Norrköping	61,134
Hälsingborg	54,158

31. *Switzerland* (1928)[1]

Zürich	222,900
Basel	144,550
Geneva	128,125
Bern	109,850
Lausanne	78,050

32. *Union of South Africa* (1921)

Johannesburg	288,131
Cape Town	212,997
Durban	151,642
Pretoria	74,052
Port Elizabeth	52,298

33. *United States* (1930)

New York	6,930,446
Chicago	3,376,438
Philadelphia	1,950,961
Detroit	1,568,662
Los Angeles	1,238,048
Cleveland	900,429
St. Louis	821,960
Baltimore	804,874
Boston	781,188
Pittsburgh	669,817

34. *Venezuela* (1926)

Caracas	135,253
Maracaibo	74,767
Valencia	36,804
Barquisimeto	23,109
San Cristóbal	15,295

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[1] Estimated.

Table VI. Chief Articles of Foreign Trade in 34 Countries

Country	Principal Imports	Principal Exports
1. Argentina	1. Textiles 2. Oils 3. Iron and steel	1. Grain, flour, and linseed 2. Meat, wool, and hides 3. Forestal products
2. Australia	1. Automobiles and parts 2. Cotton and linen 3. Petroleum spirit	1. Wool 2. Wheat 3. Hides and skins
3. Austria	1. Manufactured goods 2. Foodstuffs 3. Raw material and semi-manufactured goods	1. Manufactured goods 2. Raw material and semi-manufactured goods 3. Foodstuffs
4. Belgium	1. Raw materials 2. Foodstuffs and beverages 3. Manufactured goods	1. Raw materials 2. Manufactures 3. Foodstuffs and beverages
5. Brazil	1. Coke and coal 2. Wheat 3. Iron and steel products	1. Coffee 2. Yerba maté (tea) 3. Cocoa
6. Canada	1. Iron, steel, and manufactures 2. Coal and coal products 3. Cotton and cotton manufactures	1. Agricultural products 2. Wood, wood products, and paper 3. Animals and their products
7. Chile	1. Textiles 2. Petroleum 3. Sugar	1. Nitrate 2. Copper 3. Iodine
8. China	1. Cotton and cotton manufactures 2. Metals and minerals 3. Tobacco	1. Silk, silk material and products 2. Beans 3. Textiles and textile products
9. Czechoslovakia	1. Cottons 2. Woolen goods 3. Cereals	1. Cottons 2. Woolen goods 3. Wood, coal, and peat
10. Denmark	1. Food substances 2. Industrial products 3. Raw products	1. Food substances 2. Industrial products 3. Raw products
11. Egypt	1. Textiles and yarn 2. Metals and manufactures 3. Chemicals, perfume, etc.	1. Textiles and yarn 2. Cereals and vegetables 3. Metals and manufactures
12. France	1. Raw materials 2. Food products 3. Manufactured goods	1. Manufactured goods 2. Raw materials 3. Food products
13. Germany	1. Raw materials and semi-manufactured articles 2. Food and beverages 3. Manufactured articles	1. Manufactured articles 2. Raw material and semi-manufactured articles 3. Food and beverages

Table VI. Chief Articles of Foreign Trade in 34 Countries (continued)

Country	Principal Imports	Principal Exports
14. Great Britain. . . .	1. Food, drink, and tobacco 2. Raw materials 3. Manufactured articles	1. Manufactured articles 2. Raw materials 3. Food, drink, and tobacco
15. Greece	1. Agricultural products 2. Yarns and textiles 3. Metals and manufactures thereof	1. Horticultural products 2. Wines, spirits, and beverages 3. Oils and waxes
16. Hungary.	1. Timber, raw and worked 2. Coal 3. Cotton fabrics	1. Animals for meat and draft 2. Wheat 3. Flour
17. India	1. Articles, wholly or mainly manufactured 2. Food, drink, and tobacco 3. Raw materials and produce and articles mainly unmanufactured	1. Raw materials and produce and articles mainly unmanufactured 2. Articles wholly or mainly manufactured 3. Food, drink, and tobacco
18. Italy	1. Cereals, vegetables, roots, and the alimentary derivatives 2. Cotton 3. Wool, hair	1. Silk and artificial silk 2. Cotton 3. Vegetables and fruits
19. Japan	1. Raw cotton 2. Wrought iron 3. Machinery	1. Raw silk 2. Cotton tissues 3. Silk tissues
20. Mexico	1. Mineral products 2. Vegetable products 3. Machinery and apparatus	1. Mineral products 2. Vegetable products 3. Animal products
21. Netherlands	1. Textiles, raw and manufactured 2. Cereal and flour 3. Iron and steel	1. Textiles, raw and manufactured 2. Coal 3. Butter
22. Norway	1. Textile manufactures etc. 2. Breadstuffs 3. Minerals, unwrought	1. Wood pulp, paper, and paper manufactures 2. Animal produce (mostly food) 3. Metals, unwrought or partly wrought
23. Persia	1. Cotton piece goods 2. Sugar 3. Tea	1. Mineral oils 2. Carpets of wool 3. Fruits, fresh and dried
24. Poland	1. Ores 2. Chemicals 3. Metals and metal goods	1. Timber 2. Coke and coal 3. Pigs

TABLE VI. CHIEF ARTICLES OF FOREIGN TRADE IN 34 COUNTRIES (CONTINUED)

COUNTRY	PRINCIPAL IMPORTS	PRINCIPAL EXPORTS
25. Portugal	1. Wheat 2. Machinery 3. Fish	1. Wines 2. Fish 3. Cork
26. Rumania	1. Vegetable fibers and manufactures thereof 2. Metals, manufactures thereof, and mineral products 3. Wool, hair, and manufactures thereof	1. Cereals and cereal by-products 2. Petroleum and bitumen 3. Trees, timber, and manufactures thereof
27. Russia	1. Cotton 2. Machines and appliances 3. Wool	1. Furs 2. Petroleum products 3. Timber
28. Siam	1. Cotton goods 2. Gunny bags 3. Foodstuffs	1. Rice 2. Tin 3. Teak
29. Spain	1. Alimentary substances, including grain, sugar, wine, etc. 2. Machinery, vehicles, and vessels 3. Stone, minerals, glassware and pottery	1. Alimentary substances, including grain, sugar, wine, etc. 2. Timber and its manufactures 3. Metals and their manufactures
30. Sweden	1. Metal goods, machinery, etc. 2. Coal 3. Textile manufactures	1. Wood pulp, paper, and paper manufactures 2. Metal goods, machinery, etc. 3. Timber, wrought and unwrought
31. Switzerland	1. Cereals 2. Mineral substances 3. Cotton goods	1. Clocks and watches 2. Silk goods 3. Machinery
32. Union of South Africa	1. Food and drink 2. Cotton manufactures and piece goods 3. Hardware and cutlery	1. Gold 2. Wool 3. Diamonds
33. United States . . .	1. Crude materials for use in manufacturing 2. Manufactures ready for consumption 3. Manufactures for further use in manufacturing	1. Cotton and manufactures 2. Machinery 3. Petroleum and products
34. Venezuela	1. Hardware 2. Provisions 3. Textiles	1. Petroleum 2. Coffee 3. Cacao

PRONOUNCING VOCABULARY

ā as in āce
ā̇ as in senā̇te
ă as in ăm
ă as in *ă*ffect
ä as in ärm
ȧ as in ȧsk
ȧ as in *ȧ*bout
ē as in ēve
ē̇ as in ē̇vent
ĕ as in ĕbb
ĕ as in nov*ĕ*l
ẽ as in pẽrhaps

ī as in īce
ĭ as in ĭll
ō as in tōne
ō̇ as in ō̇bey
ô as in ôrb
ŏ as in ŏdd
ŏ as in c*ŏ*nnect
ū as in ūse
ū̇ as in ū̇nite
û as in ûrn
ŭ as in ŭp

ŭ as in s*ŭ*btract
ü as in menü
o͞o as in fo͞od
o͝o as in fo͝ot
oi as in oil
ou as in out
ŋ as in iŋk
N nasal as in boN
th as in thin
t͟h as in t͟hen
K guttural as ch in loch

Aden: ä′d*ĕ*n; ā′d*ĕ*n
Afghanistan: ăf găn′ĭ stän′
Albania: ăl bā′nĭ *ȧ*
Algeria: ăl jē′rĭ *ȧ*
Alsace-Lorraine: ăl säs′lō̇ rān′
Altai: äl tī′
Amoy: ȧ moi′
Andes: ăn′dēz
Annam: ăn näm′
Antofagasta: än′tō̇ fä gäs′tä
Antwerp: ănt′wẽrp
Anzin: äN zăN′
Archangel: ärk′ān′j*ĕ*l
Argentina: är j*ĕ*n tē′n*ȧ*
Arkwright: ärk′rīt
Armada: är mā′d*ȧ*
Asiatic: ā′shĭ ăt′ĭc
Assyria: *ă* sĭr′ĭ *ȧ*
Astrakhan: ăs′trȧ kăn′
Atacama: ä′tä kä′mä
Augsburg: ouKs′bo͝orK
Avenida Central: ä vĕ nē′t͟hä thĕnträl′
Azov: ä′zō̇f
Aztec: ăz′tĕk

Babylon: băb′ĭ lŏn
Babylonia: băb ĭ lōn′ĭ *ȧ*

Baden: bä′d*ĕ*n
Bagdad: bȧg däd′
Baikal: bī käl′
Baku: bȧ ko͞o′
Bangkok: băŋ kŏk′
Bashkir: bȧsh kēr′
Batum: bȧ to͝om′
Bavaria: b*ȧ* vā′rĭ *ȧ*
Beauvais: bō vĕ′
Bedouin: bĕd′o͝o ĭn
Bengal: bĕn gôl′
Ben-no-Baishi: bĕn′nō bī′shē
Birmingham: bûr′mĭŋ *ă*m
Bismarck, Otto von: ŏt′ō fŏn bĭs′märk
Boer: bo͞or
Bogotá: bō′gō̇ tä′
Boguslavsky: bō̇ go͝o slȧf′skē̇
Bokhara: bō̇ kä′rä
Bolivar: bō̇l′ĭ v*ȧ*r
Bolsheviks: bō̇l′shĕ vē̇ks′
Bordeaux: bôr′dō′
Borneo: bôr′nē̇ ō
Bosnia: bŏz′nĭ *ȧ*
Bothnia: bŏth′nĭ *ȧ*
Brahman: brä′m*ă*n
Brahmaputra: brä′mȧ po͞o′tr*ȧ*
Bremen: brā′m*ĕ*n

Brittany: brĭt′*ȧ* nĭ
Bruges: bro͞o′jĕz
Brussels: brŭs′*ĕ*lz
Bucharest: bo͞o′k*ȧ* rĕst′
Budapest: bo͝o′dȧ pĕst′
Buddhist: bo͝od′ĭst
Buenos Aires: bwā′nōs ī′rās
Bulgaria: bo͝ol gā′rĭ *ȧ*
Bullough: bo͝ol′ŭk
Byzantium: bĭ zăn′shĭ *ŭ*m

Cairo: kī′rō
Calcutta: kăl kŭt′*ȧ*
Cambodia: kăm bō′dĭ *ȧ*
Cameroon: kăm′ẽr o͞on′
Canton: kăn tŏn′
cartel: kär′tĕl
Cathay: k*ă* thā′
Caucasus: kô′k*ȧ* sŭs
Ceylon: sē̇ lŏn′
Charlemagne: shär′lē̇ mān
Chau: chou
Chefoo: chē fo͞o′
Che-kiang: chû kyäŋ′
Cherbourg: shĕr bo͞or′
Chihli: chē′lē
Chile: chē′lā
Chippendale: chĭp′*ĕ*n dāl
Cochin China: kō′chĭn chī′n*ȧ*
Cologne: kō̇ lōn′
Comoro: kŏm′ō̇ rō
Confucius: kŏn fū′shĭ *ŭ*s
Córdoba: kôr′dō̇ vä
Cossack: kŏs′*ă*k
Coventry: kŭv′*ĕ*n trĭ
Cuzco: ko͞os′kō
Cyprus: sī′pr*ŭ*s
Czechoslovakia: chĕk′ō̇ slō̇ vä′kĭ *ȧ*

Dahomey: dä hō′mā̇
daimyos: dī′myōz
Dairen: dī′rĕn′
Damascus: d*ȧ* măs′k*ŭ*s
Dey: dā
Dneiper: nē′pẽr
Donetz: dŏ nyĕts′
Dunkirk: dŭn′kûrk
Dvina: dvē̇ nä′

El-Azhar: ĕl ȧz′hȧr
Elbe: ĕl′bẽ
Entente: äɴ täɴt′
Essen: ĕs′*ĕ*n
Estonia: ĕs tō′nĭ *ȧ*
Euphrates: ū̇ frā′tēz
Eurasia: ūr ā′sh*ȧ*

Fatshan: fät shän′
Foochow: fo͞o′chō′
Franz Ferdinand: fränts fĕr′dē̇ nänt
Fu-hi: fo͞o′hē̇
Fuji: fo͞o′jē̇

Gandhi, Mahatma: m*ȧ* hăt′m*ȧ* gȧnd′hē̇
Ganges: găn′jēz
Garonne: gȧ′rō̇n′
Genghis Khan: jĕn′gĭz kän′
Gobelin: gō̇′blăɴ′
Graf Zeppelin: gräf tsĕp′*ĕ* lēn′
Guadeloupe: gô′dẽ lo͞op′
Guatemala: gwä′tā̇ mä′l*ȧ*
Guiana: gē̇ ä′n*ȧ*
Guinea: gĭn′ĭ

Haiti: hā′tĭ
Halfa: häl′f*ȧ*
Hankow: hȧn′kō
Hanoi: hä′noi′
Hanyang: hän′yäŋ′
Harbin: här bēn′
Hargreaves: här′grēvz
Havre: hä′vẽr; äv′r’
Hawaii: hä′wī′ē
Heppelwhite: hĕp′*ĕ*l hwīt
Himalaya: hĭ mä′l*ȧ* y*ȧ*
Hindu Kush: hĭn′do͞o ko͞osh′
Hokkaido: hō̇k kī′dō
Honan: hō nän′
Hongkong: hŏŋ′kŏŋ′

Honshu: hŏn'sho͞o
Horrocks: hŏr'*ŭ*ks
Hottentots: hŏt''n tŏts
Hwang: hwäŋ

Iberian: ī bē'rĭ *ȧ*n
Ichow: ē'chō̍
Irak (Iraq): ē räk'
Irkutsk: ĭr ko͝otsk'

Jacquard: zhȧ kȧr'
Jimmu: jĭm'o͞o
Johannesburg: yō̍ hän'ĕs bŭrg
Julius Cæsar: jo͞ol'y*ŭ*s sē'z*ȧ*r
Junkers: yo͝oŋ'kẽrz

Kabul: kä'bo͝ol
Ka-chan-fee: kä'chän fē'
Kamchatka: kȧm chȧt'kȧ
Kartell (cartel): kär tĕl'
Kazan: kȧ zän'y'
Kea-King: kyä'kĭŋ'
Kenya: kĕn'y*ȧ*
Kerenski: kĕr'ēn skē̍
Khartum: kär'to͞om'
Kiaochow: kyou'chō'
Kiev: kē'yĕf
Kin-Sai: kĭn'sī'
Koran: kō̍ rän'
Korea: kō̍ rē'*ȧ*
Kowloon: kō lo͞on'
Kremlin: krĕm'lĭn
Krupp: kro͝op
Kublai Khan: ko͞o'blī kän'
Kuenlun: kwĕn lo͞on'
Kuril: ko͞o'rĭl
Kuwait: ko͝o wīt'
Kwangchow: kwäŋ'chō
Kyoto: kyō'tō
Kyushu: kyo͞o sho͞o'

Ladoga: lȧ'dō̍ gȧ
Lafarque, Johanis: zhō̍ ä nēs' lȧfärk'
Lafarque, Pierre: pyâr
Lancashire: lăŋ'k*ȧ* shĭr
Laos: lä'ōz
Las Cuevas: lȧs kwā'väs
Latvia: lăt'vĭ *ȧ*
Le Bourget: lẽ bo͞or zhĕ'
Le Creusot: lẽ krû zō'
Lenin: lĕn'ĭn
Leningrad: lĕn'ĭn gräd
Lens: läɴs
Lewes: lū'ĭs
Li: lē
Liaotung: lē̍ ou'to͞oŋ'
Lille: lēl
Lithuania: lĭth'ū̍ ā'nĭ *ȧ*
Lobengula: lō bĕŋ go͞o'lȧ
Lorraine: lō̍'rān'
Louis XIV: lo͞o ē'
Lovat: lŏ vȧt'y'
Lübeck: lü'bĕk
Lufthansa: lo͝oft hän's*ȧ*
Lusitania: lū'sĭ tā'nĭ *ȧ*
Luxemburg: lŭk'sĕm bûrg
Luxor: lŭk'sôr
Lyon: lē'ᴏɴ'

Macao: m*ȧ* kä'ō̍
Madagascar: măd'*ȧ* găs'k*ȧ*r
Madras: m*ȧ* drȧs'
Malagasy: măl *ȧ* găs'ĭ
Manchu: măn cho͞o'
Manchuria: măn cho͞o'rĭ *ȧ*
Maredin: mär ē̍ dēn'
Marianas: mä'rē̍ ä'näs
Marseille: mȧr'sâ'y'
Marseilles: mär sālz'
Martinique: mär'tĭ nēk'
Masai: mä sī'
Mauretania: mô rē̍ tā'nĭ *ȧ*
Maya: mä'yä
Mecklenburg: mĕk'l*ĕ*n bo͝orᴋ
Medici: mā'dē̍ chē
Mekong: mā kŏŋ'
Merino: m*ĕ* rē'nō
Mesopotamia: mĕs'ō̍ pō̍ tā'mĭ *ȧ*
Milan: mī'lăn

Mings: mĭŋz
Miquelon: mēk′ lôɴ′
Miranda: mĭ răn′d*ȧ*
Mitsui Bussan Kaisha: mĭt so͞o′ē bo͝o′sän kī′shä
Mohammedan: mō̇ hăm′ĕd *ă*n
Mongolia: mŏŋ gō′lĭ *ȧ*
Mongols: mŏŋ′gŏlz
Morocco: mō̇ rŏk′ō
Moscow: mŏs′kō
Moselle: mō̇ zĕl′
Mossuline: mō so͝o lēn′
Mosul: mō so͞ol′
Munich: mū′nĭk
Mus: mo͞os
Muscovites: mŭs′kō̇ vīts

Nanking: năn′kĭŋ′
Nantes: nănts, näɴt
Narva: nȧr′v*ȧ*
Natal: n*ȧ* täl′
New Caledonia: kăl ē̇ dō′nĭ *ȧ*
Newcomen: nū̇ kŭm′*ĕ*n
Nicaragua: nĭk′*ȧ* rä′gw*ȧ*
Niger: nī′jẽr
Nineveh: nĭn′ē̇ vĕ
Ningpo: nĭŋ′pō′
Nizhni Novgorod: nyĭzh′nyē̇ nôv′gō̇ rō̇t
Norwich: nŏr′ĭj
Nuremberg: nū′rĕm bûrg

Ob: ôp
Oceania: ō shē̇ ăn′ĭ *ȧ*
Oder: ō′dẽr
Odessa: ō̇ dĕs′*ȧ*
Odoric: ō′dō̇ rĭk
Oise: wȧz
Olmeca: ō̇l′mā kä
Omsk: ômsk
Orinoco: ō′rĭ nō′kō
Osaka: ō′zä′kä
Ovaherero: ō′vä hĕ rā′rō

Pampa: päm′pä
Paola: pȧ ō′l*ȧ*
Papin, Denis: dẽ nē′ pȧ păɴ′
Paraguay: păr′*ȧ* gwā
Paraná: pä′rä nä′
Patagonia: păt′*ȧ* gō′nĭ *ȧ*
Peiping: pā′pĭŋ
Peking: pē kĭŋ′
Peruvians: pē̇ ro͞o′vĭ *ă*nz
Pescadores: pĕs′k*ȧ* dō′rĕs
Petrograd: pĕt′rō̇ grăd
Pelew: pē̇ lo͞o′
Phœnicia: fē nĭsh′ĭ *ȧ*
Pian del Carpine: pyän dĕl kärpē′nē
Plata: plä′tä
Polo, Maffeo: mäf fā′ō pō′lō
Polo, Nicolo: nē̇ kō lō′
Pondicherry: pŏn dĭ shĕr′ĭ
Port Said: pôrt sä ēd′
Portuguese: pôr′tū̇ gēz
Prague: prāg
Pretoria: prē̇ tō′rĭ *ȧ*
Ptolemies: tŏl′ē̇ mĭz

Réunion: rē̇ ūn′y*ŭ*n
Revel: rĕv′*ĕ*l
Rhodesia: rŏ dē′zhĭ *ȧ*
Riga: rē′gȧ
Rosario: rō̇ sä′rē̇ ō
Rostov: rŏs tôf′
Rouen: rwäɴ
Rubruck: ro͞o′bro͞ok
Ruhr: ro͞or
Ruiz, Bartolomé: bär tō̇ lō̇ mā′ ro͞o ēth′
Rumania: ro͝o mā′nĭ *ȧ*

Saar: zär
Saemon: sä′ā mōn
Saigon: sī gōn′
St. Helena: hĕl ē′n*ȧ*
Saint Pierre: săɴ pyâr′
Sai Shan: sī′shän′
Sakhalin: sȧ kȧ lēn′
Samara: sȧ mä′rȧ

Samoan: sä mō′ȧn
Samurai: sä′mo͝o rī
San Martín: sän mär tēn′
Sanspareil: säɴ pȧ rā′y’
Santiago: sän′tė ä′gō
Santos: sän′tōzh
Saône: sōn
São Paulo: souɴ pou′lo͝o
Sarajevo: sȧ rä′yȧ vȯ
Saratov: sȧ rä′tôf
Sayan: sä yȧn′
Schneider: shnī′dẽr
Seine: sān
Senegal: sĕn′ė gôl′
Sèvres: sâ′vr’
Shanghai: shăŋ′hä′ĭ
Shantung: shän′to͝oŋ′
Sheraton: shĕr′*ȧ* tŏn
Shi Hwang-ti: shĭ hwäŋ tē
Shikoku: shē′kō ko͞o
Sibir: sė bēr′
Silesia: sĭ lē′shĭ *ȧ*
Sinkiang: sĭn kyäŋ′
Somaliland: sō mä′lė lănd
Sudan: so͞o dän′
Sun Yat Sen: so͞on′yät sĕn′

Tagore, Rabindranath: r*ȧ* bēn′dr*ȧ*nät h’ tä gōr′
Tahiti: tä′hė tė
Taiwan: tī′wän′
Tanganyika: tăn′găn yē′kä
Tashkent: tȧsh′kĕnt′
Tempelhof: tĕm′p’l hȯf
Thames: tĕmz
Tibet: tĭ bĕt′
Tien Shan: tĭ ĕn′shän′
Tientsin: tĭ ĕn′tsēn′
Tierra del Fuego: tyĕr′rä dĕl fwā′gō
Tiflis: tyė flyės′
Tijucas: tē zho͞o′käsh
Tomsk: tômsk
Tonkin: tŏn kĭn′
Toulouse: to͞o lo͞oz′
Transcaucasia: trăns′kô kā′shĭ *ȧ*
Transvaal: trȧns väl′
Trotski: trôt′skė
Tsinan: tsĭ nän′
Tsingtao: tsĭŋ tou′
Tucuman: to͞o ko͞o män′
Tudela: to͞o thā′lä
Tunisia: tū̇ nĭsh′ĭ *ȧ*
Turkestan: to͝or kĕ stän′

Uganda: o͞o gän′dä
Ukraine: ū′krān
Ulianov, Vladimir Ilich: vlȧ dyē′mēr ė̄l′yĭch o͝ol yä′nȯf
Urga: o͝or′gä

Vaal: väl
Valparaiso: văl′p*ȧ* rā′zō
Verkhnii Udinsk: vyĕrk′nyĕ o͝odėnsk′
Versailles: vĕr sä′y’
Vistula: vĭs′tū̇ l*ȧ*
Vladimir: vlȧ dyē′mēr
Vladivostok: vlȧ dĭ vŏs tôk′
Volga: vŏl′g*ȧ*
Volkhov: vôl′ᴋȯf
Volta: vŏl′tȧ
Vosges: vōzh

Weihaiwei: wā hī wā′
Weihsien: wā sĭ ĕn′
Weser: vā′zẽr
Württemberg: vür′t*ĕ*m bĕrᴋ

Yakutsk: yȧ ko͝otsk′
Yangtze: yäŋ′tsĕ
Yao: yä′ȯ
Yenisei: yĕ nė sĕ′ė
Yokohama: yō′kȯ hä′mȧ
Yonne: yȯn
Yuan Shih-kai: yü än′shē kī′
Yugoslavia: yo͞o′gȯ slä′vĭ *ȧ*
Yunnan: yo͝on′nän′

Zambezi: zăm bē′zĭ; zȧm bā′zė
Zorzania: zôr zā′nĭ *ȧ*

INDEX

Aden, 135
Africa, European settlement in, 141; how Great Britain acquired possessions in, 143–147; cotton cultivation in, 147; trip through British, 147–158; French Empire in, 199–206; German colonies in, 245–249; loss of German colonies in, 379
Agricultural machinery, in France, 190; in Russia, 404, 405
Agriculture, decline of English, 93–94; effect of Industrial Revolution on, in France, 189; German use of science in, 229–230; post-war, in Germany, 393–395; ancient Chinese, 419
Agriculture and agricultural products, in medieval England, 27–28; in France, 174–175, 190–191; in Madagascar, 204–206; in Indo-China, 206–207; in Germany, 220, 224–230; in Russia, 293–298, 403–406, 408; per cent produced by Europe and United States, 326; in Europe, 348; in Great Britain, 399; in China, 438–444; in Japan, 509–510; in South America, 535–536, 557–559; in Argentina, 562–566; in Brazil, 570–573; in Chile, 578. *See also* Farms and Farming, Barley, Corn, Rice, Rye, Wheat, etc.
Airways of Europe, 385–387
Albania, 264, 266
Alexandria as a center of medieval trade, 79–81
Algeria, 198, 199–201
Algiers, pirates of, 200–201
Alsace-Lorraine, 235, 236; Germany secures, 223; Germany loses, 379–380
Amoy opened to European trade, 461
Ancient civilization, of India, 114–118; of Egypt, 138, 140; of China, 416–430, 455–456; of Japan, 483–485; of American Indians, 528–533
Andes Mountains, 548–549
Annam, 206, 207
Antimony, production of, 470–471
Arabia, 251
Archangel, 291, 294
Area, of British Isles and Canada, 111; of India, 124; of British Africa, 143; of Rhodesia, 143; of Anglo-Egyptian Sudan, 150; of British Empire, 158, 245; of France, 167; of Germany, 218; of German Empire, 232–233, 245; of French Empire, 245; of small European countries, 264, 267–268; of Russia, 272, 274; of Russian Empire, 291; of Russian forests, 294; of Europe, 325; of earth controlled by Europeans, 333; of European countries changed as a result of the World War, 379–380; of China, 435; of Japan, 481; of Tibet, 518; of South America, 548; of Argentina, 561; of Brazil, 568; of Chile, 575
Argentina, area of, 561; population of, 561; products of, 562–566; immigration to, 563; trade of, 568
Arkwright, spinning-jenny, 61, 62
Armada, destruction of Spanish, 83
Armies, growth of European, 358–359
Artels in Russia, 406, 408
Articles of trade, seventeenth century, 84–85
Asia, early European knowledge of, 39–45; spread of European civilizations into, 603–610; spread of European education in, 605–608; opposition to adoption of European methods in, 608–610
Astrakhan, 308
Atacama Desert, 576
Augsburg, medieval, 38
Australia, population of, 9; British control of, 110; settlement of, 134

Austria, 264, 266
Austria-Hungary, German alliance with, 360; entrance into World War of, 363; effect of World War upon, 380
Aztec Indians, 530–531

Baden, 219
Bagdad, 43; as a center of medieval trade, 79–80
Baku, 314
Balkan countries, 380
Baltic Sea, 276, 280, 281, 282
Bangkok, 210
Banking companies of Venice, 37
Barley, 226, 296
Bavaria, 219; agriculture in, 225–226
Belgium, 264, 266; a trading center, 81
Benjamin of Tudela, 42
Berlin to Bagdad Railroad, 252, 253–256
Birmingham, 59, 70
Bismarck, Otto von, 223, 235
Black Death, 52; effect in England of, 53, 55
Black Sea, 276, 278, 284, 285
Black-earth region. *See* Ukraine
Boer War, 145
Boers, 143, 145, 146, 156
Bogotá, climate of, 551–552
Bokhara, 288
Bolsheviks, 368
Bombay, population of, 5, 124
Bonaparte, Napoleon, 175, 177, 179–180, 183
Boxer Rebellion, 465–466
Brazil, Portuguese colonies in, 533; population of, 538, 552–553; history of, 541; description of, 545–546; minerals of, 557, 569
Bremen, medieval, 38
Bridgewater, duke of, 72–73
Britain, trade of, with Rome in tin, 79; poor trade location of, 80
British Commonwealth of Nations, 110 n.
British Empire, 106–113; principal lands in, 107; comparison of Great Britain with, 111; reasons for growth of, 112–113, 159; India made part of, 118–123; how Canada became a part of, 133; lands about the Mediterranean added to, 135–140; African possessions of, 141–147; growth of, 158–159; relation of trade to growth of, 159; Kowloon, Hongkong, and other Chinese ports added to, 461. *See also* Australia, Canada, India, etc.
British South Africa Company, 143
Bruges as a center of medieval trade, 81
Buenos Aires, 561, 566–568
Bulgaria, 264, 266
Byzantium. *See* Constantinople

Cable between United States and Chile, 580
Cabot, John, 81
Cairo to Cape Town railway, 147, 148
Calcutta, population of, 5, 124
Calendar, beginning of Chinese, 420; beginning of Mayan, 529
Cambodia, 206
Cameroon, French, 198; German, 245, 247–248
Canada, British control of, 101 n.; comparison of British Isles and, 111; a dominion, 133; population of, 133; settlement of, 133
Canals, in England, 72–74; in France, 180, 186, 341; in Germany, 224; in modern Europe, 340–341; in China, 452
Canton opened to European trade, 461, 464
Cape Town, 143, 157
Capitalists, early English, 57; investments of English, 140, 149, 159, 555; investments of French, 210, 555; Japanese, 501–502; investments of Japanese, 505; investments of German, 555
Caroline Islands, 251
Carpine, Friar John of Pian del, 42
Cartels, in Germany, 242; European, 389–391
Caspian Sea, 275, 278, 282, 285
Cattle-raising, in Africa, 248; in Argentina, 564, 565–566
Cattle-raising regions of the world, 565. *See also* Live stock
Caucasus, the, 285–287

Charcoal, use of, in French industries, 179

Charcoal famine in England, 64

Chile, area of, 575; population of, 575; products of, 576–579

China, 39; lands in, taken by Germany, 250; family life in, 415–417; long history of, 417–418; duties of emperor in, 420–421; social classes in, 421–424; democracy in ancient, 424; area of, 433–434; population of, 435; agriculture in, 438–445; villages in, 446–449; transportation in, 449–452; communication in, 452; life in ancient, 455–459; first European traders in, 456; defeated by Japan, 464–465; a republic, 468; concessions to European countries, 503; concessions to Japan, 504–505; isolation of, 517–518; Western education in, 605–606

Chinese Empire, ancient, 419; building of, 428–432, 433

Chinese revolutions, 465–468

Chosen. *See* Korea

Chou dynasty, 424–425

Cities. *See* Towns and cities, Buenos Aires, Bruges, Peiping, etc.

Civilization, two chief kinds, 13; contrasts between, 583–594

Clermont, the, 88

Climate, of desert, 9–10, 202–204; of Russia, 294–296; of Europe, 322–324; of China, 436; dependence of Chinese on, 444–445; of Japan, 497; of Asia, 514–515; of South America, 544, 550–552, 555–556; as an influence in European settlement, 598, 601

Clipper ships, 87–88

Cloth-making, English medieval, 56; comparison of French and British, 169–170. *See also* Manufacturing, Textiles, etc.

Coal, use in England of, 63–64; English ironmasters' use of coke and, 64; transportation of British, 73; effect of English resources in, 92–93; German, 234–235, 236; consumption of, in industrial countries, 313; Europe's need for, 343–344; capital invested in Chinese, 470

Coal production, British, 69, 70, 91, 377, 398; of leading industrial countries, 92, 313; of France, 177–178, 185; of United States, 185; of Germany, 222, 232; of Russia, 313; of Europe, 326–327, 388; of China, 377, 469; of Japan, 504; of Chile, 578–579

Coal supplies, of Turkey, 251; of Russia, 313, 314; of Europe, 344; Germany's loss of European, 379–380; of China, 469; of Japan, 498, 502–503, 504; of Asia, 515; of South America, 556; of Chile, 578–579

Coaling stations, Germany's need for, 251

Coast line, European, 330, 331

Cochinchina, 206, 207

Coffee, Brazilian, 571–573

Coffee-growing regions of the world, 572

Cologne, 235

Colonies, contrasts between North American and South American, 538–539. *See also* British Empire, French empire, etc.

Columbus, Christopher, 525; effect upon European countries of discoveries by, 81–82

Commons, 52; fencing off, 53–54

Communication, in England in 1700, 60; in Europe before World War, 355–358; in Europe after World War, 385–387; difficulties of Asiatic and early European, 519; between Chile and the United States, 580; in agricultural civilizations, 586; in industrial civilizations, 586

Comoro Islands, 198

Confucius and his teachings, 427–428

Congo, French, 198

Constantinople, 254, 255, 276, 277, 284–285. *See also* Istanbul

Coöperative organizations, in Europe, 389–391; in Russia, 406, 408

Copper, in Africa, 248–249; in Japan, 501; in Chile, 576

Corn, export from Argentina of, 563

Corporations in Germany, 242. *See also* Cartels

Cossacks, 283

Cotters, 26

Cotton, importation into England of, 69; cultivation in Africa, 147; Germany's need for, 247–248

Cotton goods exported from Great Britain, 90, 91

Cotton-growing regions, England's dependence on, 95–96; of South America, 535–536

Cotton-manufacturing in China, 471–472. *See also* Textiles, Manufacturing

Court life, of France, 170, 172; of Japan, 486–488

Crafts, decline of English home, 65

Crafts and craftsmen, medieval, 31–33; of England, 56–58; of India, 116–118; machine industries in India replacing, 129; in France, 169–170, 191–193; encouragement by Louis XIV of, 170; in Germany, 220–221, 241; in Russia, 304–306; in China, 420, 423, 425–427, 448–449; in Japan, 483, 487–488; in ancient American Indian civilization, 529, 530, 532; in agricultural civilizations, 588–589

Crusades, causes of, 39–40; effect of, 40, 44–45

Cyprus, 135

Czar, first, 279; abdication of, 368

Czechoslovakia, 266, 380

Da Gama's discovery and its effect, 82

Dahomey, 198

Dardanelles, importance of, 284

Defoe, Daniel, 56

Denmark, 264, 266

Desert of Chile, 576. *See also* Sahara Desert

Deserts, population in, 9–10

Diamonds, of Africa, 145, 157, 249; of Brazil, 569, 570

Dictatorships in South America, 541–542

Division of labor in Middle Ages, 32

Dnieper River, 275, 276, 277, 278, 283

Don River, 275, 278

Dudley, Robert, 64

Duma, 367

Duna River, 281

Dutch in China, 457

Dvina River, 275, 282

East India Company, formation of, 84–85; and India trade, 113; king grants charter to, 119; appointment of governor-general to, 121; British government takes control from, 123; in China, 457

Ebony, 247

Education, European, 352–353; in Germany, 392–393; in France, 396; in Russia, 408–409; in ancient China, 422; in Japan, 485; spread of European, 605–608

Egypt, 135; British occupation of, 138; British need of, 138, 140; Great Britain recognizes independence of, 140; Western education in, 607

Empire, European rivalry for, 355. *See also* British Empire, French empire, etc.

Engines, improvements in, 61; textile industry affected by use of, 61–63; effect of, on production of coal, 70

England, manor life in, 25–29; medieval fairs in, 35; contrast between medieval and modern, 51, 61. *See also* British Empire *and* Great Britain

Essen, 238–239

Estonia, 266

Europe, in 1100 A.D., 25–31; fertile land of, 326; food production in, 326; minerals of, 326–327; conditions in 1914, 361–362

Exports, of England, 86; of France, 193; of China, 444; of Japan, 511, 512; of South America, 557–558; of Argentina, 563, 568; of Brazil, 571, 574; of Chile, 576, 578, 579

Factories, growth of English, 56–58, 65–66; workers in English, 66–68; conditions in early English, 67; improvements in English, 68; in China, 472

Fairs, medieval, 30–31, 34–35; effect of, 31; in England, 35; in France, 35; in Italy, 36; Russian, 306

Famine, in Russia, 402; in China, 445

Farms and farming, in medieval times, 27–28; in England, 52–55; in France, 165–166, 175–176, 190–191; in Bava-

ria, 225–226; in Germany, 225–230; in Russia, 295, 297–302, 400; in China, 422–423, 438–441, 444–445; in Japan, 480–481, 507–510; in Argentina, 562–566; in Chile, 578
Finland, 266, 283
Fishing industry in Japan, 510
Florence, 33
Flour mills in China, 472
Flying shuttle, 61
Foochow, 461
Food, England's decrease in production of, 93–94; England's dependence upon other countries for, 93–94, 101–102; Europe's production of, 326; where industrial countries secure, 348; South America's export of world, 557
Forests, in Togo, 247; in Turkey, 251; in Russia, 294
France, population of, 6; area of, 167; agriculture in, 174; effect of Industrial Revolution in, 189; and Mediterranean Sea routes, 206; waterways of, 341; after World War, 395–398
Freeholders, 26
French empire, 195–198; population of, 196; lands included in, 196–198; in North and South America, 198–199; in India, 199; in Africa, 199–206; improvements of land within, 210–211; value to France of, 210–211; interest of French in building, 211–212; area of, 245; concessions in China to, 465
French Equatorial Africa, 202
French Revolution, condition in France before, 170, 172, 173; effect of, 173–175, 176
French West Africa, 202
Frigid zones, population in, 7–8
Fu-hi, 419
Fukui, 480
Fulton, Robert, 88

Gandhi, Mahatma, 609–610
Genoa, 33
German Empire, in Africa, 146; beginnings of, 223; growth of, 233, 244–256; Chinese lands added to, 250; need of, for islands, 251; effect of World War upon, 379–380
German Southwest Africa, 245, 248–249
German States in 1800, 218–220; government of, 219
Germany, population of, 6; medieval cities in, 37–39; area of, 218; population of towns in 1815, 221; natural resources of, 234; situation of, for trade, 259; shipbuilding in, 259; struggle of, for world trade, 259–260; waterways of, 341; center of European land trade, 350–351; after World War, 391–395
Genghis Khan, 431
Gibraltar, 135, 136, 138, 284
Gold, of Rhodesia, 144, 145; of Latin America, 534–535; of Brazil, 569–570
Gorki. *See* Nizhni Novgorod
Government of ancient China, 420–421, 424–425
Grain production, in Germany, 230; in Russia, 296, 298. *See also* Wheat, Rye, etc.
Grand Khan, 277
Grapes, cultivation of, in France, 190
Great Britain, population of, 6; England becomes, 61; dependence of, upon other parts of world, 93–104; need of trade and protected sea paths for, 135–136; need for land for, 158; after World War, 398–399
Great Wall of China, building of, 429–430; changes caused by, 431
Great Western, the, 88
Greece, 264, 266
Greenland, population of, 8
Guadeloupe, 198, 199
Guiana, French, 198, 199
Guilds, medieval, 32–33
Guinea, French, 198
Gulf Stream, the, 323, 324

Haiti, 199
Halfa, 149
Hamburg, 38, 260
Handicrafts. *See* Crafts and craftsmen
Hanoi, 208–209
Hanover, 219
Harbors. *See* Ports

Hargreaves's spinning jenny, 61
Hokkaido Island, 481
Hongkong, importance of, 461
Honshu Island, 481, 483
Horses, raised in Argentina, 564. *See also* Live stock
Hottentots, 249
Hungary, 264, 266
Hwang-ti, emperor, 419–420
Hydroelectric power, in Germany, 232; in Europe, 346; in Japan, 498, 500; in South America, 556

Iceland, population of, 8
Ideas, spread of, through Europe, 351–353
Immigration, to France since World War, 397–398; to South America, 554–555; to Argentina, 563
Imports, of East India Company, 85; of France, 181–182; of Germany, 231; of Japan, 511, 512
Inca Indians, 531–533
India, 39; early British trade with, 84–85, 86; England's trade control of, 113; early native life in, 113–116; how civilization grew up in, 114–115; caste system in, 115–116; crafts and craftsmen of, 116–118; rule of East India Company in, 118–123; British lack of understanding of caste system in, 119–120; mutinies in, 121–123; area of, 124; population of, 124; changes in, 127–129; French possessions in, 198; Western education in, 606–607
Indo-China, French, 198; value to France of, 206–207; French seizure of, 209
Industrial Revolution, English, 60–76; condition of France before, 167–173; causes for slow development of French, 176–179; German, 222–243; beginning of Chinese, 466–467, 468–469; Japanese, 495–496; causes for delay of Asiatic, 519–520; effect upon South America of, 557–559; world spread of European population because of, 602–603
Industries, in Europe at close of World War, 376–377; in Europe since World War, 388–391; in Great Britain since World War, 398, 399; in Russia, 404, 406, 408; Japanese capital invested in, 501–502; of American Indians, 529, 530, 532; possibilities for further development in South America of, 557; in Brazil, 574; in Chile, 575, 576, 578–579; adoption of European methods in Asiatic, 608
Inns, medieval, 46
Interdependence, of India and Great Britain, 129–130; of European countries, 337–350, 389–391
Irak, 251, 252, 380
Irkutsk, 311
Iron and steel, British manufactures of, 91; German, 235, 236, 240
Iron cartels of Europe, 389–391
Iron ore, consumption in industrial countries of, 312; Russian production of, 312; production in industrial countries of, 312, 471
Iron production, in France, 178–179, 185; in Europe, 326–327, 389; decline of European, 377. *See also* Cartels *and* Pig-iron production
Iron-ore supplies, in Great Britain, 97, 398–399; in Turkey, 251; in Russia, 313, 314; of Europe, 347; Germany's loss of European, 379–381; of China, 470; of Japan, 500–501; of Brazil, 557, 569. *See also* Minerals
Irrigation, in Africa, 147, 149; in Irak, 252; under the Incas, 532
Istanbul, 254, 274, 285
Italy, 264, 266; medieval fairs in, 36; medieval trade of, 36–37; center of early Mediterranean trade world, 81; German alliance with, 360
Ivory Coast, 198

Jacquard, Joseph, 352
Japan, privileges taken by, in China, 464–465, 504–505; transformation of, 480–481; early history of, 483–489; location for world trade, 498; natural resources of, 498–501; industrial development of, 502

Japanese Empire, 484–485; beginning of, 481–482; building of, 502–503, 504–505; jealousy of European powers on extension of, 503
Jerusalem, struggle of Turks and Christians for, 40
Jimmu, 483, 484
Johannesburg, 156–157
Jungle, why few people live in the, 10–11; of Africa, 153, 155; of Brazil, 546, 550, 569
Junkers, 226

Kamchatka peninsula, 290
Kazan, 308
Kenya Colony, 146
Kerenski, Alexander, 368
Khartoum, 148, 149, 150–151
Kiaochow, 250
Kiev, 277, 306, 307
Kimberley, 145, 156
Korea, 482, 484; China loses, 464, 502, 503, 504
Kowloon, granted to Great Britain, 461
Krupp steel works, 237–239
Kublai Khan, 42, 277, 431, 490–491
Kuril or Chishima Islands, 481
Kyoto, 500
Kyushu, 481, 483

Labor laws for children, 67
Lafarque, Johanis, 165
Lake Baikal, 290
Lake Ladoga, 276, 277
Lake Victoria, 154
Land, under cultivation in Egypt, 138–140; ownership of, in France, 174; varieties of Russian, 294, 295; division of Russian, 297, 300–301; fertile, of Europe, 326
Land inclosures in England, 53–54; effect of, 55
Laos, 206
La Salle, explorations of, 198
Latin America, Spanish monopoly in, 534–535; origin of name, 537
Latvia, 266
"Lay of the land," European, 326; effects upon Chinese civilization of, 431; of Asia, 518; of South America, 548–550; of Brazil, 573
Le Creusot, 183–184
Leeds, 59, 70
Lena River, 289, 290
Lenin, 368
Leningrad, 282, 306, 307
Liaotung Peninsula ceded to Japan, 503
Lithuania, 266, 280
Liverpool, 59, 70
Liverpool and Manchester Railway, 76
Live stock, in Germany, 230. *See also* Cattle-raising, Horses, Sheep-raising, etc.
Lobengula, 143–144
Location, of England, 79–82, 103; of India, 124–125; of Germany, 224; of Japan, 497, 498; of South America, 547–548
London, in 1100 A.D., 25; medieval, 34–35; population of, in 1500, 59; population of, in 1815, 221
Looms, increase in England of steam-power, 63; Jacquard, 352. *See also* Textile industry
Lord of the manor, powers of, 26, 28, 29
Lorraine in World War, 372
Louis XV, 172
Louisiana, sale of, 199
Lovat River, 276
Lübeck, medieval, 38
Lumber production of Chile, 578
Luxor, 148
Lyon, 183, 187; silk industry in, 188

Macao, Portuguese at, 456
Machines, agricultural, in France, 190; use in agricultural civilizations of, 585; use in industrial civilizations of, 585, 589. *See also* Engines, Looms, Industries, Manufacturing, Textile industry, etc.
Madagascar, 198; French seizure of, 204–205; value to France of, 205–206
Madras, 124
Mahogany, 205, 247
Malagasy, the, 205
Malta, 135
Manchester, 59, 70; growth of, 73–74, 90

Manchester Ship Canal, 73
Manchu dynasty, 432, 465; end of, 467–468
Manor, division of population on, 26; division of work on, 26, 27, 28, 29; division of land on English, 27–28; self-sufficiency of, 29; trade in, 30–31
Manor life, in 1100 A.D., 25–31; changes in English, 55
Manufacturing, in medieval Europe, 29–33, 38; early English, 56–58; growth of British, 90–91; in France, 178, 182–185; in Germany, 232, 236–241; in Russia, 315–316; in China, 471–472; in Japan, 511; in Brazil, 574; in Chile, 579–580; in industrial civilizations, 589
Marianas Islands, 251
Market, India as a British, 129–130; Great Britain as an Indian, 130
Martinique, 198, 199
Mauretania, 198
Maya Indians, 528–530
Mecklenburg, 219, 226
Medieval bards, 30
Medieval cities, 33, 34–39
Medieval crafts and craftsmen, 31–33
Medieval German towns, 37–39
Medieval towns, crafts and craftsmen in, 33; fortifications of, 38–39
Medieval trade, increase in, 44–45; dangers of, 45, 46; around the Mediterranean, 79–81
Medieval world, size of, 24–25
Mediterranean Sea, pirates on, 36, 37, 200–201; early trade about, 135–136; Great Britain's need for land about, 135, 136; population around, 136; trade routes of France on, 206
Mekong River, 207
Merchant marine, growth of British, 86–89; German, 259–261; French, 396–397
Mesopotamia, 39; civilization in, during Middle Ages, 42–44; Great Britain *vs.* Germany in, 256. *See also* Irak
Metz, 235
Middle Ages. *See* Medieval
Milan, 33; silk industry in, 188
Millet, production in, and export from China, 444
Minerals, Russia's share in world production of, 314–315; Europe's lack of, 327, 347; resources of China in, 470–471; resources of Japan in, 498, 500–501; resources of South America in, 557; resources of Chile in, 575–576. *See also* Coal, Diamonds, Iron, etc.
Ming dynasty, 431–432
Mining in Africa, 146, 155
Miquelon, 198, 199
Mir of Russia, 300
Mitsui Bussan Kaisha, growth of, 501, 502
Mongolia, how the people live in, 437
Mongols, 274, 277, 278, 288, 429; invasion of China by, 431
Morocco, 198, 204
Moscow, 277–279, 306, 307, 308; at close of World War, 378–379
Mosul, 43, 80
Mountains, why few people live in the, 11–12; of South America, 548

Narva, 281
Nationalism, spread of European, 355–358
Natural resources, of Germany, 234; of Europe, 325–327; of Asia, 515–518; of South America, 555–557; of Brazil, 569–573. *See also* Agriculture and agricultural products, Land, Climate, Iron, Coal, Raw materials, etc.
Navies, growth of European, 359–360
Near East, growth of German trade in, 251–256; early trade route in, 254–255
Netherlands, 264, 266
Neva River, 276, 281, 282
New Caledonia, 198
Newcomen's engine, 62
New Guinea, 251
New Zealand, settlement of, 134
Niger, 198
Nile, cradle of the, 154
Ningpo, opened to European trade, 46
Nitrate industry, of Germany, 395; of Chile, 576
Nizhni Novgorod, 305, 306
Norsemen, 274, 275–277

Norway, 264, 266
Nuremberg, medieval, 38

Oats, French production of, 189; in Germany, 226; Russian production of, 293, 296
Ob River, 289
Odessa, 308
Odoric, Friar, 42
Oil, chief regions producing, 101; dependence of England upon other countries for, 101; Mesopotamian, 252; Russian production of, 314; European importation of, 327; European need for, 344, 346; world's supply of, 345; Japanese supply of, 498; South American supply of, 556
Omsk, 311
Opium trade in China, 459–460
Opium wars in China, 460–461; result of, 461, 463
Orange Free State, 143
Osaka, 480
Ostrich farms of Africa, 248
Ovaherero, 249

Palestine, 39, 251, 380
Palm oil, 247
Pampa of Argentina, 564–566
Panama Canal, advantages to Chile and United States of, 580
Papin's engine, 62
Paris, growth of medieval, 35; as a trading center, 35; center of French railways, 186; population of, in 1815, 221
Peasants, Indian, 125–126; Russian, 300–304; Chinese, 445
Peiping (Peking), 282, 431; population, 5
Pelew Islands, 251
Perry's visit to Japan, 494–495
Persia, 39, 251, 380
Pescadores ceded to Japan, 503
Peter the Great, 281–283
Petrograd, *see* Leningrad
Petroleum, *see* Oil
Pig-iron production, British, 69, 185; German, 185, 222, 232; American, 185; French, 179, 185; Russian, 185, 314; Chinese, 470
Pirates in the Mediterranean, 36, 37, 200–201
Poland, 266, 280, 284
Polo, Marco, 42–44
Pondicherry, 199
Population, of the world, 3–5; distribution of, 4–13; centers of densest, 5–6; of Australia, 9; division on English manors of, 26; growth of British, 68; English urban, 70; decrease of, in rural England, 70–71, 94; of British Empire, 109, 245; of British India, 124; of Rhodesia, 143; comparison of French and British, 167, 180; of France, 167, 180, 181, 187; of French empire, 196, 245; German, 230–231, 233; of German Empire, 232–233, 245; of small European countries, 264, 268; of Russia, 274, 299; principal agricultural, 302; of Europe, 327–328; controlled by Europeans, 333; division according to occupation in ancient Chinese, 421–424; of China, 435–437; on Chinese rivers, 451–452; Japanese, 480–481, 506–507; division according to occupation in ancient Japan, 489–490; of Asia, 516; early American Indian, 528; of Latin America, 536–538; of Brazil, 538, 552, 568–569; of South America, 552–555; of Argentina, 561; of Chile, 575; of agricultural and industrial civilizations, 587–588; spread of European, over the world, 596–602
Ports, German, 259, 260; Russia's need for warm-water, 280, 291; important European, 330, 331; Chinese, opened to European trade, 461; sailing distances between South American and certain other, 547; of Chile, 576, 579
Portugal, 264, 266
Portuguese, in China, 456–457; in Japan, 491; conquests in America, early, 533–534
Portuguese empire, breaking up of, 541
Potatoes, 174–175, 227–228
Power, used in England, 60–61; increase in France in steam, 183; European dependence upon mechanical, 343; in

agricultural civilizations, 584; in industrial civilizations, 584. *See also* Hydroelectric power
Press, influence of European, 355–357
Privateers, 82–83
Prussia, 219, 222; iron industry in, 235

Queen Victoria proclaimed Empress of India, 123

Railways, of England, 74–76; of India, 128, 129; of France, 180, 186–187; of Germany, 222, 232; of China owned by Germany, 250; of Russia, 310–312, 401; of Europe, 338–339, 384; of China, 452, 465, 469; of Japan, 505–506; of South America, 549; of Argentina, 549; of Chile, 549; of Brazil, 574
Rainfall, in southern Russia, 296; distribution of world, 600
Raleigh, Sir Walter, 79
Raw materials, England's dependence upon other parts of world for, 94–102; used in agricultural and industrial civilizations, 586–587. *See also* Natural resources, Coal, Oil, etc.
Réunion, 198
Revel, 281
Revolution in France, 173; in Russia, 366–368
Revolutions in Latin America, 539–541; leaders of, 540; conditions following, 541–542
Rhodes, Cecil, 143, 157
Rhodesia, area and population of, 143; mining in, 143, 144, 145, 155
Rice, causes for India's large crop, 125
Rice-growing, in Indo-China, 208; areas of the world, 437; in China, 438–441; in Japan, 508, 509
Riga, 281, 291
Rio de Janeiro, 544–545
Rivers, of India, 125; of Russia, 275, 276; location of European cities on, 332; European, 340–341; South American, 549–550
Roads, English, 71–72; French, 179; African, 249; Russian, 278, 309–310; Roman, 342; European, 342, 384–385; Chinese, 419, 449–450; Japanese, 505
Rocket, the, 74, 75, 76
Roman trade with Britain, 80, 81
Rostov, 308
Rubber, England's dependence upon other countries for, 99; regions which produce, 99; in Cameroon, 247; used by South American Indians, 536; Brazilian, 570–571
Rubruck, Friar William of, 42
Ruhr steel district, 236–238
Ruhr valley, 234, 235, 236
Ruiz, Bartolomé, 526–527
Rumania, 264, 266
Russia, population of, 6; area of, 272, 274; medieval, 274–280; rivers of, 275, 276; area of forests of, 294; three sections of European, 294–296; fairs in, 306; recovery of, since revolution, 399–409
Russian Empire, growth of, 279–291; area of, 291; concessions in China to, 465
Russo-Japanese War, 503–504
Rye, German production of, 226, 230; in Europe, 226, 227; in Russia, 293, 295, 296

Saar valley, 234
Sahara Desert, 9, 147; French possessions in, 198, 201–204; population of, 204
Saigon, 207
St. Petersburg, 282, 291. *See* Leningrad
St. Pierre, 198, 199
Sakhalin, 481, 482, 497
Samara, 308
Samoa Islands, 251
Samurai, 489, 496; discipline of, 490
Saratov, 307
Saxony, 219
Schneider, Eugene, 184
Science, effect of early use of, 68; German use of, 229–230, 240–241; European use of, 328–329, 351–352; introduction into China of new methods of, 466–467; isolation of Asia and the use of, 517–519; use in Brazil of, 573–574; spread of, 595–596; importance of European, 601–603

Sea of Azov, 283
Secret alliances in Europe in 1914, 360–361
Senegal, 198
Serfs, 26; duty of, to medieval lords, 28–29; poverty of, in medieval times, 29–30; Russian, 298–300
Shanghai, population of, 5; opened to European trade, 461; European settlement in, 462, 463–464
Shantung, 245, 250
Sheep-raising, in England, 53–54; in Africa, 146, 248; in France, 175; in Argentina, 564; in Chile, 578
Sheffield, 58
Shi Hwang-ti, 428–430
Shikoku Island, 481
Shipbuilding industry, German, 259–260
Siam, French seizure of part of, 210
Siberia, 288–290; need of railroads in, 311
Silk imported into England, 69
Silk industry, in Lyon, 188; in Milan, 188; in ancient China, 420; in modern China, 441–443; in Japan, 510
Silk production of the world, 510
Silver of Latin America, 534
Sisal hemp, 536
Slave trade, British, 82
Slavery in Latin America, 535
Social divisions, in medieval England, 26; in China, 421–424; in Japan, 489–490. *See also* India, caste system in
Soil, of India, 124–125; of Russia, 294–296. *See also* Land
Solomon Islands, 251
Somaliland, British, 135; French, 198
South America, agriculture in, 535–536
Spain, 264, 266
Spanish conquerors in America, early, 533–534
Spanish empire in America, breaking up of, 539–540
Specialization, of labor in Middle Ages, 29–33; of trade, 56–57; of labor in India, 115–118
Spinning jenny, 61
Stagecoaches in England, 72
Standard of living, of medieval serfs, 29; in India, 125–126, 127; European, 362; Russian, 408, 409; in industrial and agricultural civilizations, 591–593
Steamships, American, 88; English, 88–89
Steel alloys, England's dependence upon other countries for, 99
Steel cartels, in Germany, 242; in Europe, 389–390, 391
Steel production, British, 100; French, 182–184; German, 232, 236–238, 240. *See also* Iron and steel
Stephenson's steam locomotive, 74, 75, 76
Sudan, Anglo-Egyptian, 142, 150; French, 198
Suez Canal, 135, 136, 138
Sugar beets, 228, 229, 230; production in France, 175, 189
Sun Yat Sen, 467
Sweden, 264, 266
Switzerland, 264, 266
Syria, 198, 251; French control of, 206; after World War, 380

Tahiti, 198
Taiwan, 464, 482, 497, 503
Tallinn. *See* Revel
Tanganyika territory, 146, 154, 245
Tartars. *See* Mongols
Taxation, in France, 168, 170, 172; in Russia, 300–301
Tea, English trade in, 87; countries producing, 101; Chinese production of, 444
Telegraph and telephone. *See* Communication
Temperate zones, why people live in, 12–13
Temperature, world, 601
Textile industry, English, 56–57, 95–96; effect of Industrial Revolution upon workers in, 66; growth of, 69; British, 90–91; effect of cotton gin on, 95; French, 169–170, 179, 182, 187, 188; German, 241; Chinese, 471–472. *See also* Silk industry
Textile machinery, 61–62
Textiles, early European, 29, 30, 31, 32, 33, 38

Three-field system, medieval, 27–28, 220

Tibet, how the people live in, 437

Tin, Roman trade in British, 79; African, 248; Chinese supplies of, 470

Togo, 198, 245, 246–247

Tokyo, population of, 5, 507

Tomsk, 289

Tonkin, 206, 207, 208

Towns and cities, medieval English, 35; medieval French, 35; growth of English, 59–60; population of Indian, 124; French, 181, 187–188; German, 221, 230–231; Russian, 302–304, 306–308, 400–401; effect of World War upon, 378–379; Chinese, 445–449; Japanese, 477–480, 507; South American, 556–557; Argentinian, 561, 562, 566–568; Brazilian, 569, 573–574; of Chile, 579

Trade, medieval London as a center of, 34; medieval Paris as a center of, 35; Venetian and Oriental, 36–37; medieval articles of, 44; English domestic, 72; Roman and British, 79–80; medieval, 79–81; English slave, 82; growth of English, 83–86; effect of Industrial Revolution on English, 90–102; effect of agriculture on growing British, 94; England as the center of world, 102–104; early English control of Indian, 113; importance of British and Indian, 129–130; Algerian and French, 199–200; Madagascan and French, 205, 210; Indo-Chinese and French, 210; Moroccan and French, 210; Tunisian and French, 210; Germany's favorable location for, 224; German, 232, 242–243, 350–351, 388; German and Near-Eastern, 251–256; Germany's struggle for world, 251–261; increase in German, 261; Europe's advantageous position in regard to, 332–333; European rivalry for, 355; effect of World War upon European, 376–377, 381–383; decline of German, 377; effect of World War upon American foreign, 380–383; post-war European, 388–389; French, 396–397; Japanese, 511–512; Aztec, 530–531; Inca Indian, 531; Argentinian, 568; Brazilian rubber, 570–571; Chilean, 576, 578, 579; in agricultural civilizations, 589; in industrial civilizations, 590; spread of modern European, 596–597

Trade routes, of Middle Ages, 45; of England in 1700, 85; of the world, 102; from Great Britain to India, 137; between Europe and Asia, 254–255; used by Norsemen, 276; of Japan, 497, 498; of South America, 547, 558

Traders, knowledge of Asiatic civilizations brought to Europe by, 40, 42; German, 246–247, 248; Norse, 275–277; China and the early European, 456–459; Chinese land leased by, 456, 457; Japan and early European, 491–492, 495; Japan and the effect of European, 495–496

Trading companies, British, 84–86

Transportation, in England in 1700, 71–76; in Africa, 147; in France before Industrial Revolution, 179–180; in France after Industrial Revolution, 186–187; in Germany, 222, 224; in Russia, 275, 308–312; in Europe, 338–343, 376–377, 384–387; in China, 449–452; in Japan, 505–506; in South America, 556; in agricultural civilizations, 585–586; in industrial civilizations, 586. *See also* Airways, Canals, Railways, Roads, etc.

Trans-Siberian Railway, 310–311

Transvaal Republic, 143

Triple Alliance, 360, 366

Triple Entente, 360

Trotski, Leon, 368

Tsingtao, 250

Tundras of Russia, 294

Tungsten, Chinese production of, 471

Tunisia, 198, 201

Turkestan, 287–288

Turkey, 39, 251, 264, 266, 380; Western education in, 608. *See also* Constantinople

Turnpike companies, 72

Typhoons in Japan, 497

Uganda, 146, 153–154
Ukraine, 283–284, 295, 296; farming methods in, 298
Union of South Africa, 145
United States, enters World War, 368–369; effect of World War upon trade of, 380–383
Upper Silesia, 234, 235, 380
Ural Mountains, 288, 294

Venice, handicrafts in medieval, 33; trade of medieval, 36–37, 79, 81
Victoria Falls, 155
Vienna at close of World War, 378
Vikings, 274
Villeins, 26
Vladivostok, 290, 291
Volga River, 275, 278, 282, 285
Volkhov River, 276
Volta, Upper, 198

Water power, early English factories run by, 58; of Japan, 498–500
Water transportation, in Russia, 308–309; in China, 451–452
Waterways, in France, 180, 341; European, 340–341, 385; in Germany, 341
Watt's engine, 63
Wedgwood, Josiah, 57
Wheat, decrease in English production of, 93–94; importation into British Isles of, 94; exportation from Argentina of, 563
Wheat production, African, 147; French, 174, 189; German, 226, 230; world, 227; of the United States, 293; of Russia, 293, 295, 296; of Argentina, 562–563, 564; and consumption in various countries, 564
White Sea, 280–281
Whitney's cotton gin, 95
William of Prussia, 223
Wine production in France, 189, 190
World War, 363–365; early effects of, 365–366; entrance of United States into, 368–369; Europe at close of, 370–371; lives lost in, 371–372; cost of, 372; property destruction in, 372–375; European debts following, 375–376; effect upon European industries and trade of, 376–377; cities affected by, 378–379; Germany's land losses in, 379–380; effect upon United States of, 381–383; European transportation following, 384–387; rebuilding of European industries after, 388–391; recovery of Germany after, 391–395; recovery of France after, 395–398; recovery of Great Britain after, 398–399; recovery of Russia after revolution and, 399–409; Russia's loss of land as a result of, 402
Writing, Chinese, 420
Württemberg, 219

Yakutsk, 289
Yaroslavl, 305
Yenesei River, 289, 290
Yokohama, 477, 478, 480
Yuan Shih-kai, 468
Yugoslavia, 264, 266, 380

Zambezi River, 155

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